

ST. BARTHOLOMEW'S HOSPITAL JOURNAL



VOL LIX

JULY 1955

No 7

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Editor: G. R. KINROSS WRIGHT

Women's Representative: MISS N. COLTART

Charterhouse Representative: MISS A. M. McDONALD

Manager: DOUGLAS CHAMBERLAIN

Assistant Manager: L. J. CHALSTREY

July 1955

CONTENTS

Editorial	207	The Chamberlains' Secret, by P. J. Bekenn and J. F. Pigott	223
Harwell	211	Hadfield's Folly, by the Rowing Correspondent	228
Introducing the Family Doctor	212	Letters to the Editor	231
French Bayonets, by Penry Rowland	213	Examination Results	232
Antoine François, Comte de Fourcroy, by W. R. Bett	214	Record Reviews	233
Why I Baptised Michael Scott, by J. D. Parker	215	Sports	234
Births, Engagements and Deaths	217	Book Reviews	235
The Linear Accelerator at Bart's, by Professor J. Rotblat	218	Awards	238

"Don't hurt that poor butterfly, Bertie!"

In 1898, when this illustration first appeared in Isaac Walton advertising, Arthur seemed to think he might have to "take the can back" for Bertie's high spirits. But, fortunately, even if our fashion plates did make these boys look a bit precious, the clothes were good and tough, with double seats in the trousers.

We cut our teeth in the business of school outfitting three-quarters of a century ago. By now we've cut our wisdom teeth at it. We are officially recognised outfitters to most schools in the neighbourhoods round about our shops, and we do a big trade with families whose children go to school outside our areas too. This is partly because we are still a family business and whole families—grandfather, father and son—find it pleasant to shop with us; and partly because we have high standards of value for money.



Isaac Walton's COMPLEAT OUTFITTERS

City Branch and Head Office, London and Home Counties Area: Ludgate Hill, E.C.4.
WATFORD, 77 High Street. BROMLEY, Market Square. PALMERS GREEN, 363-5 Green Lane.
NEWCASTLE, Grainger Street. YORK, Lendal House, Lendal.

MEDICAL SICKNESS SOCIETY

The A B C of PERSONAL INSURANCE



or how to provide yourself with a
complete scheme of personal cover

in one policy at reduced rates

ASSETS EXCEED £6,000,000

MEDICAL SICKNESS, ANNUITY AND LIFE ASSURANCE SOCIETY LIMITED

3 CAVENDISH SQUARE, LONDON, W.1
(Telephone: LAngham 2991)

Please write for particulars, mentioning this advertisement

When you are BUYING A NEW CAR
ask for details of the HIRE PURCHASE
SCHEME of the MEDICAL SICKNESS
FINANCE CORPORATION LTD.



Antihistamines for old and young

When the contents of Pandora's Box were released, Hope alone remained. To the patient of allergic diathesis, threatened by a veritable Pandora's Box of ills, the antihistamines 'Histantin' and 'Actidil' represent far more than hope.

For adults 'Histantin' is the product of choice, giving prolonged relief with a minimum of side-effects.

The new quick-acting antihistamine, 'Actidil', exerts its effect for about 12 hours and is also notable for low incidence of side-effects. 'Actidil' Elixir has been specially formulated and clinically tried for the treatment of allergic conditions in children.

'HISTANTIN', 50 mgm., is issued in bottles of 25, 100 and 500 at list prices (subject to usual discount) of 6/6, 24/6 and 110/-.

'ACTIDIL' compressed products of 2.5 mgm. in bottles of 25 and 500 at list prices (subject) of 6/6 and 110/-.

'ACTIDIL' ELIXIR in bottles of 20 fluid ounces, for dispensing, at a list price (subject) of 15/-.



BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd.) **LONDON**

A Superior Buffered Analgesic

'Alasil' Tablets—the improved form of salicylate medication—provide the efficient analgesia expected from their content of aspirin. Their superior acceptability, derives from their content of a reliable buffer, which minimizes the tendency to gastric irritation sometimes caused by the use of aspirin alone.

Advantages

'Alasil' is an advanced sedative and antipyretic; it does not tend to induce gastric irritation; because of its high tolerability, it may be used for long-term administration even to those with sensitive stomachs, and to children.

Composition

'Alasil' Tablets contain the recognized antacid corrective, 'Alacol' (Colloidal Aluminium Hydroxide), which permits their sedative principle, acetylsalicylic acid, to exert its action with minimal risk of side-effects.

Indications

Symptomatic pain generally; rheumatism, fibrositis, lumbago, headache, dysmenorrhoea; dental pain.

Packs & Prices

To PHARMACISTS (P.T. exempt for dispensing) Standard size 1000, in 250 bottles, 30/8. 'Juvenile' size: 375, 6/6; 750, 11/3; 1500, 21/6



ALASIL JUVENILE TABLETS

Alasil 'Juvenile' Tablets specially sized for children, and neither coloured nor flavoured, are packed in tubes bearing dosage - for - age instructions.

Alasil

M.391

SAMPLE AND LITERATURE ON REQUEST TO A. WANDER LTD., 42 UPPER GROSVENOR STREET, W.1



Towards meeting the demands of growth

THE HIGHER METABOLIC NEEDS of the young which accompany natural growth and development and which are further increased by heavy daily expenditure of energy, tend to diminish reserves of physical and nervous vitality.

'Ovaltine' provides a useful supplement to help to satisfy the extra needs for proximate and accessory food principles. The malt, milk, cocoa, soya and eggs which 'Ovaltine' contains are blended to form a highly nutritious food beverage — deliciously flavoured and easily assimilated.

It is of value in helping to maintain normal weight increase and is of undoubted help to those recovering from the debilitating effects of the common fevers of childhood. For growing children 'Ovaltine' is a dietary reinforcement which can be routinely recommended with confidence.

OVALTINE



A. WANDER LTD., 42 Upper Grosvenor Street,
Grosvenor Square, London W.1

Vitamin Standardization per oz.
Vitamin B₁, 0.3 mg.;
Vitamin D, 350 i.u.; Niacin, 2 mg.

THE MEDICAL DEFENCE UNION Ltd.

INCORPORATED 1885

Registered Office

Telephone EUSton 4244

TAVISTOCK HOUSE SOUTH, TAVISTOCK SQUARE, LONDON, W.C.1.

Secretary: ROBERT FORBES, M.B., Ch.B.

IMMEDIATELY AFTER QUALIFICATION, YOU should take steps to apply for membership of The Medical Defence Union to secure protection against legal actions arising out of the pursuit of your profession. Every Medical and Dental practitioner, from the humblest to the most distinguished, requires the protection of a defence organization. Membership is a Guarantee of Security.

THE INDEMNITY afforded to members in respect of a case undertaken by The Union is an invaluable feature in view of the large damages and costs that can result from an adverse verdict.

PROTECTION is also provided on special terms to Medical and Dental practitioners resident and practising overseas.

ENTRANCE FEE 10s. ANNUAL SUBSCRIPTION £1 for each of the first three years for newly qualified entrants, **£2** each year for members of more than three years standing. (No entrance fee payable by candidates for election within one year of registration with General Medical Council or the Dental Board.)

MEMBERSHIP EXCEEDS 41,000

Forms of application for membership obtainable from the Secretary.

Banking hospitality



For the convenience of Hospital staff and students there is an office of National Provincial Bank adjacent to the Hospital's wages and salaries office. You will find it a pleasure to bank with the National Provincial. The helpful personal service and quiet efficiency of this friendly bank is something you will appreciate in your day to day dealings.

Hours of Business

Mondays to Fridays 10-3

Saturdays 9.30-11.30

This office is under the management of Mr. F. H. J. Mead of West Smithfield Branch, 59 West Smithfield, E.C.1, who will welcome enquiries.

National Provincial Bank *where good fortunes grow*

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LIX

JULY 1955

No. 7

EDITORIAL

"Here each individual is interested not only in his own affairs but in the affairs of the state as well: even those who are mostly occupied with their own business are extremely well-informed on general politics — this is a peculiarity of ours: we do not say that a man who takes no interest in politics is a man who minds his own business; we say that he has no business here at all."

Pericles' Funeral Oration, Thucydides.

ST. BARTHOLOMEW'S HOSPITAL has many associations with the political life of England; some are due to its long history and situation in London, whilst others are through its members and benefactors. Its very foundation stems from the political influence Rahere enjoyed at the Court of Henry I.

Life for those living or working in the Hospital during the early centuries of its existence can have been anything but dull. On Saturday, June the 15th, 1381, they witnessed one of the great scenes of English history: the crushing of the peasant's revolt. According to the Chronicle of St. Mary at York, King Richard II and his followers were grouped on the East side of Smithfield, while Wat Tyler and the rebels were arrayed on the West and North. The blow struck by Walworth the Mayor must have caused the onlooking Sisters and Brethren to catch their breath. Tyler was carried into the Hospital, but was given little time to recover; for shortly after the Mayor entered and ordered him to be brought into Smithfield, where he was beheaded. This was summary justice, though probably no more than Tyler's due, since the mob had beheaded on the preceding Wednesday, a person no less than the Archbishop of Canterbury.

Two hundred years later the successors of these Brethren were to hear the crackling of

the flames which enveloped the Smithfield Martyrs.

The strange affair of the Russian doctors calls to mind our own Dr. Rodrigo Lopez, physician to Queen Elizabeth I and first resident physician to the Hospital. Accused with some other Portuguese of attempting to poison his royal patient, he was found guilty and confined in the Tower. "A very goodly jewel," said to have been part payment for this unethical task, was discovered in his baggage. We shall probably never be certain of his guilt, for this damning piece of circumstantial evidence may quite well have been planted by his enemies. He ended his days at Tyburn, hung, drawn and quartered. The evidence against the Russian doctors must have been less conclusive for they still survive. Like Lopez, they had to endure the abuse of the ill-informed masses. In Tudor and Stewart times the Brethren's hospitality was not restricted only to the sick. The Governor of Dunkirk was held within the precincts as a political prisoner. And Colonel Pride, who purged the House at Cromwell's command, also lived at the Hospital.

During the succeeding centuries the Hospital has maintained its connection with political life, largely through the activities of its members. The late Lord Addison is a

notable recent example of a Bart's doctor-politician. The Hospital still continues to provide physicians and surgeons to Kings and Queens but, fortunately or otherwise, royal preferment is less easily obtained than it was in Rahere's day.

St. Bartholomew's is, of course, not the only British hospital with interesting political associations, nor are Bart's men the sole representatives of the profession in politics. But, as space is limited, the part must serve for the whole. In foreign countries, too, medical men have shown that they can become formidable politicians. J. P. Marat, a leader of the French revolution; Sun Yat Sen, founder of the Chinese Republic; and "Tiger" Clemenceau, famous orator and Prime Minister of France; all started their careers as doctors. These men forsook medicine completely, and were not "*mostly occupied with their own business.*" Though both Lord Addison and Marat achieved considerable success with their medical work.

Thousands of years have passed since Pericles described that First Democracy, and political decisions can no longer be taken in the market place. A complex system of government with proportional representation has removed the burden of political responsibility from the ordinary man; and, oddly enough, the more specialized a person's rôle in society, the more likely is this to be the case.

Many members of the medical profession hold the firm opinion that because they serve humanity, they are relieved of all obligation to take part in its guidance. Is the general situation at home and abroad so well ordered that a large body of men, whose knowledge of people and their needs is unsurpassed, can afford to take no active interest in politics? It has taken the atom bomb to make the physicists aware of their responsibilities. Perhaps the National Health Scheme with its attendant political negotiations will perform the same office for medical men in this country.

The New Hospital Block

At last with Ministerial blessing the Little Britain site has been cleared for action. Work on the foundations should begin within the month. The first building to be erected is L-shaped and adjoins the cloisters of St. Bartholomew's-the-Great. It will accommodate the special departments in four wards, each containing thirty beds. The cost is estimated at £400,000 and it will take two and a half years to complete. Eventually, a tunnel passing under Little Britain will connect the new block with the main Hospital buildings.

Meantime the archaeologists under the direction of Mr. W. F. Grimes, director of the London Museum, have been exploring the site. Two diggings have been made and parts of the Old Priory brought to light. Mr. Grimes tells us that the site is disturbed, i.e., disorganised by the foundations of more recent buildings, so that investigations are difficult. We gather that the authorities are apprehensive lest a Mithras Temple or similar sensational archaeological find should turn up during the excavations, as this would delay the building more than somewhat. But it is unlikely that Roman remains will be unearthed, for the site is outside the City wall. Nevertheless we intend to watch the

work on the foundations with a clinician's eye. Was not the Pathology Department, appropriately enough, built on a Roman cemetery?

We hope to publish an article on the building by Mr. Guttridge of Adams, Holden and Pearson, the architects, in a future issue.



*Site of the new building
A view of St. Bartholomew's-the-Great,
showing the cloisters and exploratory
ditches.*

View Day

Glorious sunshine banished the showers of the preceding day, and in the afternoon the Square filled with summer dresses, laughter and reminiscences. We were there too; wearing, as Dr. Strauss remarked, new personae for the occasion. The pageantry was less than in former years; for morning dress was, by decree, no longer *de rigueur*, whilst the red geraniums, due possible to the vicissitudes of the weather, seemed sparse and sickly. Though the yellow tulips in Sister Tutor's window-box did their best to make amends. Any who doubt the splendour of massed geraniums against mellowed stone should go to Oxford and see Peckwater Quad. And *they* have neither fountain nor trees.

The procession of Head Porter, Treasurer, Clerks, Matron, Steward, and Governors, moved from block to block on their journey round the wards. And in each ward the same timeless questions: "Dr. —, are you satisfied with the conduct and nursing of your ward?"

"Matron, are you satisfied . . . ?"

"Sister, are you satisfied . . . ?"

Meanwhile everyone thronged to the side-shows: the Hospital departments open to view, some with elaborate exhibitions. Even the most knowledgeable visitor or blasé student could find something of interest. The collection of Hospital Seals in the Great Hall; the anatomical drawings displayed in the Library: to learn anatomy with such artistry open before one would convert drudgery to pleasure. Upstairs, the Pathological Museum can always be relied on to draw the crowd. Its gruesome contents exert a fascination, which cannot be matched by the fluttering of cards in Hollerith machines, or the tasting of saltless bread. Surprisingly, the majority of the visitors here were nurses—"I'm *sure* they took that out of the man in bed fifteen."

This year, however, the prize exhibit was to be found in the Charterhouse preclinical school. The apple of Professor Rotblat's eye, the newly-christened Linear Accelerator. Golden-tongued experts declaimed the merits of this electronic marvel, tastefully decorated for the most part in cream and blue enamel. Anyone who looked at all bemused with the flashing lights, or the intricate confusion of wave-guide and wires, was seized by the indefatigable Professor,

whose ability to make the complicated appear simple is surely miraculous.

Back in the Hospital the visitors were beginning to depart. The wards had been open, and the Sisters praised for their decorative skill and for the delicious teas, so lavishly provided. But, as we left, it was our impression that the patients were still slightly puzzled about the meaning of it all.



View Day Procession

The Head Porter; Clerk to the Governors, Treasurer; and behind, the Assistant Clerk and Matron.

Sir Henry Dale, O.M., G.B.E.

The congratulations of all Bart's men go to Sir Henry Hallet Dale on the occasion of his eightieth birthday.

Sir Henry qualified at Bart's in 1903, having previously studied at Cambridge, and devoted his career to research. Four of the many contributions he has made to scientific knowledge are outstanding: the discovery of the oxytocic effect of posterior pituitary extracts, the demonstration of histamine's role in the phenomenon of anaphylaxis, the recognition of acetylcholine as a chemical transmitter of nervous impulses, and his work on biological standardization. Perhaps more important still has been his influence on the research of his contemporaries in his capacities as Director of the National Institute for Medical Research and President of the Royal Society. Sir Henry numbers the Nobel Laureate and the Order of Merit among the honours that have been bestowed upon him.

The Abernethian Society

An expedition from the University of the West Indies to the Columbian Andes was the subject of a talk given to the Society on June 2 by Dr. Bunjé. He developed his theme round a series of magnificent colour photographs taken by himself. We hope to publish an abridged account in a later number, without, alas, colour blocks. The April *Journal* though pleasing artistically, was otherwise most ruinous.

Before the audience dispersed a curious event took place: the elections of the Abernethian Society. We congratulate Mr. Whitehouse on being elected President, and Messrs. Buchanan and Marsden on becoming Secretary and Treasurer. Having paid our respects to these gentlemen we cannot forbear from making some comment on the elections and on the general state of the Society. Nepotism is a word guaranteed to raise the systolic pressure; but it surely is no coincidence that of the seven members elected to office five should come from one of the more ancient Universities: a proportion which is at gross variance with that in the student body as a whole. The two brave souls who were coerced, so the President informed those present, into opposing the official nominees received one vote apiece. The Duke of Newcastle himself couldn't have managed better.

We asked the retiring President to comment on the absence of preclinical nominations. "Well, we have a Charterhouse representative, but as so few preclinicals attend..." A Charterhouse representative. The phrase is pathognomic of the widening rift between the Hospital and the preclinical school. We feel that some effort should be made to reduce this gap and that it is for the Abernethian Society to show the way.

The Society has a fine tradition reaching back over a hundred and fifty years. Yet in recent times it has shown all the signs of being mortally sick. It has looked on benignly while necessity created rivals, such as the Junior Osler, the Physiological, and the Natural History; and remained inactive when these usurped those of its members who prefer to read their own papers, to discuss, and to recount their own field work. The Abernethian Society as it is today would give no opportunity to a Paget. He would be forced to found a society of parasitologists in order to tell of his dissecting room discoveries. The committee will no doubt

set up the weak cry: what about our Clinical Evenings? Well, what about them? Like View Day, they come but once a year.

We find it difficult to believe that the Society cannot make some attempt to regain its former prestige. And if the new committee fails in this task, there is perhaps some preclinical Odysseus who will shake off his lethargy, return, and put the house in order.



"What have you there my pretty maid?" *

Members of Parliament

Those students who were drenched to the skin whilst waiting in Trafalgar Square on Election Night, will be pleased to learn that of the eleven doctors elected to the New Parliament two are Bart's men: Mr. J. D. Cronin and Dr. D. McI. Johnson.

Mr. Cronin qualified in 1939. After the war he specialized in surgery, becoming orthopaedic surgeon to the French Hospital. And in 1952 he was elected a member of the L.C.C. He won the Loughborough constituency for the Socialists by a substantial majority of 4,263.

Dr. Johnson qualified in 1926 and went into general practice. After the war he gave up his practice and started a publishing firm.

* Drs. Spence and Bodley Scott as seen by our Candid Camera on View Day.

In addition to being a doctor, he is a Barrister-at-Law and sits on the Sutton and Cheam Borough Council. He won Carlisle for the Conservatives by the uncomfortably small margin of 370 votes.

We congratulate them both and look forward to reading of their exchanges set down in the pages of Hansard.

View Day Ball

One of the best things the Coronation did for Bart's was to transform the old Students' Union Dance into the View Day Ball. The Princess was changed into a Queen. The Bart's Ball, as it is now rightly known, has continued ever since as one of the most popular of the all too rare highlights of the Hospital year. Description fails. If you missed it this year you must come next. It was in 1953 that the Ball was first made a Hospital rather than a College occasion. But if we lacked anything on that glorious May night it was more Lay and Senior Staff.

Oxford-Bart's Club

The Oxford-Bart's Club are holding their Annual Sherry Party in the Hospital Library on the evening of Tuesday, the 12th of July. Anyone eligible who has not received an invitation should write to the Hon. Secretary, the Abernethian Room, St. Bartholomew's Hospital.

Art Exhibition

We invite Bart's men past and present, and those in any way connected with the Hospital, who have artistic talent, to prepare for this exhibition, which will be held sometime in October. The organizing committee tell us that any art form is welcome. So, whether you put brush to paper, chisel to stone, hand to potter's wheel, or simply pour paint on to canvas and tread it in with your feet, we hope you will support the exhibition. Details of time and place will be published later.

The Journal

Mr. A. Salisbury has resigned from the post of Editor. We congratulate him on his recent marriage.

The Assistant Editor, Mr. G. R. Kinross Wright, has been elected Editor in his place.

Miss Ann Mary McDonald is the new Charterhouse representative on the Publication Committee.

HARWELL

ON ARRIVAL at the Atomic Energy Establishment, all members of the expedition were presented with large red discs stating that we were VISITORS, and were therefore to be faithfully attended throughout. After lunch, in a large room where the concentrated brainpower of the assembled staff had to be felt to be believed, the party was escorted to the Medical Research Council Block. Among other things here, the effects of chronic irradiation on groups of mice were demonstrated: the main finding is a decrease, the aetiology of which is as yet unexplained, in their life span, as compared with that of control groups. There is no significant increase of tumour production, and the pathology is largely that of premature degeneration of all tissues. However, in another department of this block, mice which had developed tumours subsequent to irradiation were shown; and the point was made by Dr. Mole that it is now established that degenerative changes in the reproductive system, occur before there is any appreciable degree of leucopenia. In Dr. Mole's classic phrase: "Most people wear their radiation film monitor over their hearts; I keep mine in my trouser pocket."

The party was then guided to the basement, the new home of a genetic research unit from Edinburgh. Here, enclosed monastically in feet-thick walls of concrete, experiments are carried out with radioactive Cobalt on mice. The Cobalt itself is sunk in a well in the floor, and is raised by remote control on a Heath Robinson series of wires and pulleys. A sudden inconsequential roar of machinery caused some of the more fearful visitors to look furtively round for the Emergency Exit, but we were assured—that in the unlikely event of the thing suddenly rearing up from the depths, the dose we would receive would be so small as to be harmless.

Tea and Geiger-counters came together, the latter in many forms varying from a huge machine, which looked as if it should bear the legend "I Speak your Atomic Weight," to a small vacuum-cleaner type, pleasingly designed and handy for the home of the future.

The climax was the visit to the pile, B.E.P.O., a charming childlike name which sits uneasily upon the Moloch it describes. The building which houses the pile is a vast

aircraft hangar, and in the middle of it squats B.E.P.O., a huge square mass of concrete walls and radioactive middle, honey-combed with slots for graphite trays carrying, in the main, uranium. The power needed to feed, and the air to cool, this monster is of the astronomical order at which the imagination boggles and is left at the post. Perhaps it would help the gentle reader to be told that three similar constructions in America use as much power as the whole of the United Kingdom! The workings of the pile were described competently by a young physicist, who clearly is on friendly terms with it; and amplified by Professor Rotblat.

Passing in some trepidation a sign which said "Danger—Neutron Beam," but omitted to say where the Beam was, the party ended up in the Isotope Department. Here there is a closely protected store of radioactive Cobalt housed in a sort of solid shed known locally as Lenin's Tomb. It is used currently for experiments on carrots, onions and potatoes; the suggestion that the mass production of fission chips should be started met with the reception it deserved. A ball of uranium, the size of a coconut, or for those who prefer more surgical descriptions, about 5 inches in diameter, was lying on a table: the idle suggestion by the resident expert that we should attempt to pick it up, nearly precipitated multiple ruptures amongst those present, without any perceptible movement of the ball. This, which to one simple mind was almost the most impressive thing seen at Harwell, was also the last. Closing time had arrived, and, with the courtesy and efficiency which had been so evident all day, we were shepherded beyond the steel and wire confines to the outside world again.

The thanks of the Abernethian Society are most warmly extended to Professor Rotblat, for all his help in proposing, organizing and accompanying the tour.

MISS N. COLTART.

Royal College of Physicians

PROFESSOR H. V. MORGAN and PROFESSOR IVAN DE BURGH DALY, F.R.S., have been elected Fellows.

INTRODUCING THE FAMILY DOCTOR

On April 7, Dr. Ronald Gibson, of Winchester, gave a lecture under this title to final year students. The dominant feeling of the student after qualification, he said, should be "I am a doctor—how exciting," and from the first he should strive to become an honorary and ex-officio member of each patient's family. No one could hope to be a good family doctor without certain attributes, particularly compassion, sympathy and understanding. "It is easy to be 'shot of' patients if you feel like that, by sending them into hospital. The right way, however, is to keep them at home and treat them there with the help of District Nurse and Home Help, Midwife and Health Visitor, Ambulance Car Service and X-Ray department, Consultant and Specialist (in domiciliary consultation), Pathologist and Medical Officer of Health, the appropriate Priest and, often forgotten but always valuable, the doctor's own partners. You know the patient first and the disease afterwards. Your expert colleague knows only the disease. Therefore let him know what sort of patient he is to see." If he had to go into hospital, it took very little time to pop in and see him there, and you could explain so many hospital mysteries in the language that you and he had learned to talk together.

There were two absolute essentials; the patient should be thoroughly examined, and the notes should be efficiently compiled. "Never tower above children, get your head down to their level somehow, look at the tonsils last, and let Nurse give the injections." Neurotics, he said, were often charming people, sensitive and generous and as they talked more than most patients, it was advisable that they should say the right things about you. You should never consign patients, like rubbish, to dustbins labelled "Old Age" or "Neurosis" or "The Menopause." It was too easy to put the lids on and leave the contents to rot. Something could always be done to help them. The stress and strain patients were nearly all women. "If you tell a male patient to go to bed, he will thankfully retire for as long as he can persuade you to let him stay there.

A similar instruction to his wife will require at least a week's notice before she can so arrange her duties that she can take herself off to bed, without the family starving or going unwashed from start to finish of her illness. And if you try to keep her in bed too long you will find that she has timed your visit to a nicety, so that she is in bed for a maximum of ten minutes before you arrive and thirty seconds after the car has been driven away."

Finally, there would always be with you the Anxiety States, the Melancholics, the Depressives, the *Staphylococcus aureus* (penicillin resistant, of course) and the haemolytic streptococcus; and, casting a shadow over everything, carcinoma.

The next lecture in this series will be by Dr. L. W. Batten, of Hampstead, probably some time in October.

FRENCH BAYONETS

by PENRY ROWLAND

TO MATTHEW WARD was admitted an emaciated man suffering from an oesophageal stricture. He was depressed — with reason. After settling down for a couple of days, he talked freely and dramatically of the origin of his trouble.

He was by profession a sword swallower and had a European reputation. The troupe to which he belonged had a date in Paris and received their usual warm welcome. His turn was the high spot of the Show and was very impressively announced by the compère, who insisted that unless absolute silence was observed throughout the performer would not appear. The clatter at the tables gradually subsided and at a signal the big drum of the orchestra was struck twice with dramatic effect and utter silence reigned.

From between the great curtains, the little man walked to the centre of the stage, bowed, and took up a careful and definite stance with his head thrown far back, picked up a bayonet from a little table and slid it gently and slowly down his gullet. Then without

turning his head he picked up a second and a third—and a fourth! Then an assistant at a sign handed him one after another and at last 9 or 10 were in place. The great crowd, holding their breath and gazing, were entranced.

Suddenly a man near the front shouted out: "It is false. It is false." He rushed up to the platform, on to the stage and reaching the performer grasped the bayonets in both hands and dragged them forcibly out.

Picture the scene! The performer unable to move even his head made no resistance and fell to the ground bleeding profusely. Pandemonium broke out, and the horrified blunderer disappeared under a crowd of execrating Parisians, and presumably went to trial.

The wretched performer was in hospital for many weeks, but made a good recovery. He could, of course, never repeat his performance, but was accepted in the same troupe—as a Monkey Impersonator—and made a success of it, yet because of repeated sojourns in hospital, he lost his job. And just before entering Matthew he had pawned his Monkey suit with the valuable head for £20, and felt that it was the end of everything.

I told this story to my father—a minister, who went round and gathered the cash needed to rescue the suit, redeemed it and presented it at the bedside. Some tickets for a box at a famous Music Hall arrived a few days later.

God and the doctor we alike adore

But only when in danger, not before;

The danger o'er, both are alike required,

God is forgotten, and the Doctor slighted,

Epigrams: JOHN OWEN.

* * *

The Journal

Contributors are reminded that articles must reach the *Journal Desk* by the first of the month prior to that of intended publication. Writing should be on alternate lines, on one side of the paper, and must be legible. Double-spaced typescripts are looked upon with especial favour.

ANTOINE FRANÇOIS, COMTE DE FOURCROY (1755-1809)

CHEMIST AND REVOLUTIONARY

by W. R. BETT.

THOUGH he lived in the great period of French chemistry, Antoine François de Fourcroy in the bicentennial month of his birth is remembered not for any epoch-making discovery, but as a brilliant teacher who through the spoken and the written word popularised Lavoisier's doctrines. Inevitably his reputation has suffered by reason of his political activities and particularly through his alleged complicity in the execution of Lavoisier, on whose shoulders he had climbed to fame and success. Many of his actions in later life were apparently motivated by recollections of the miserable poverty that had been his lot in childhood, and of some of the slights which he had suffered.

Belonging to a poor branch of a noble family, Fourcroy was born on June 15, 1755, in Paris, where his father held a humble position as pharmacist to the Duke of Orleans. Possessing a remarkable memory and a love of poetry, the boy used to entertain his sisters by reciting entire scenes from plays and by his imitations of famous actors. His father's friend, the celebrated anatomist Félix Vicq d'Azyr, was instrumental in obtaining for him a medical scholarship. As a student Fourcroy lived in squalor. For a neighbour he had a water-carrier with twelve children, and his earliest attempts at medical treatment were practised on this family. In return, he knew that, though he might go short of other necessities, he was at least assured of a plentiful supply of water. When the Academy of Medicine refused to grant him as a protégé of Vicq d'Azyr the degree of docteur régent, Fourcroy took up the study of chemistry. His talents had been recognised by J. B. M. Bucquet, the professor of chemistry at the medical school, who gave him the run of his laboratory and on one occasion, when he was unable to lecture, asked him to take his place on the platform. Although quite unprepared, Fourcroy spoke for two hours

without hesitation, developing his theme in logical sequence. In 1784 he was appointed to the chair of chemistry at the Jardin du Roi in succession to P. J. Macquer. In view of subsequent events it is interesting to recall that he was highly recommended for this post by Lavoisier.

For more than twenty-five years Fourcroy taught chemistry to large numbers of students. His natural gifts for oratory were carefully cultivated, and he became one of the most popular lecturers of his time. All the tricks of oratory were his: he knew how to be eloquent in the grand manner, and he knew how to be lighthearted and witty, but he always held his audience with the magic of his voice, his lucidity, and the perfect logic of his presentation.

THE CHEMICAL QUARTET

Lavoisier took the promising young man under his wing and chose him as one of the famous quartet, in company with Claude Louis Berthollet and Guyton de Morveau, that was to devise a new and revolutionary nomenclature for chemistry. This was submitted to the French Academy in 1787. Fourcroy published more than fifty scientific papers in his own name, and a similar number in collaboration with L. N. Vauquelin. It is difficult to be sure today which of the latter were based on his original researches, for Vauquelin was the most modest and self-effacing of men, and there is reason to believe that Fourcroy received the credit for work which had actually been done by his assistant.

Fourcroy's book *Philosophie Chimique* (1792) was translated into most European languages. In his student-days he had supported himself by translating, and in 1777 he performed a useful task by rendering Ramazzini's classic work on occupational diseases from Latin into French under the title '*Essai sur les maladies des artisans*'.

His practical work included research on the chemistry of various animal substances, on urinary calculi, and on albumen in vegetables. He discovered magnesium phosphate and did much to strengthen the ties between chemistry and medicine. This took a practical form in his book *'L'Art de reconnaître et d'employer les médicaments dans les maladies qui attaquent le corps humain'* (1785).

THE REVOLUTIONARY

Fired by ambition and not devoid of personal spite and animosity, Fourcroy played a prominent part in the French Revolution. He was a member of the National Convention, and during the Reign of Terror his place on the Committee of Public Safety gave him considerable power. Yet he did nothing to prevent the closing of the French Academy and without a word of protest allowed his benefactor Lavoisier to go to the guillotine. His

conduct is all the more inexplicable, for he is known to have exerted himself to save other men of science from a like fate. That jealousy of Lavoisier's position at the head of French chemistry led Fourcroy to engineer his death seems incredible, and it is more likely that he honestly regarded the great scientist as a counter-revolutionary and an enemy of the people. Ironically, he was chosen to deliver the eulogy when the *Lycée des Arts* held a memorial service for the martyred Lavoisier in 1796.

In his last years Fourcroy was stripped of many of his offices. He had an apoplectic seizure on December 16, 1809—on the very day he was created a count of the French Empire—and died in the arms of his faithful assistant Vauquelin. His eulogy was pronounced by Baron Cuvier, who made it quite clear that he would not have paid tribute to a man whom he believed guilty of complicity in a plot against Lavoisier.

WHY I BAPTIZED MICHAEL SCOTT

by J. D. PARKER

I IMAGINE there are few Christian doctrines about which so many misconceptions exist as the teaching on baptism. On the one hand we have those who consider it a kind of social function, a conventional "naming" of the child, traditionally involving one of their rare visits to church. On the other extreme there is the case I read about in the *Daily Mirror* not long ago: a child had died early in infancy unbaptised, and an Anglican clergyman had informed the mother that the infant, having been cut off from God, would go to hell and presumably suffer the tortures of the damned. I doubt if these tidings greatly endeared the mother to the ministers of her neighbourhood.

Let us examine the position a little more fully. We first hear of baptism in the Scriptures when St. John was baptising by immersion in the River Jordan. John's baptism differed from that instituted by Christ in that the former was merely a

symbolic "cleansing," signifying repentance for sin, whereas Christ later elevated it to the dignity of a sacrament, that is to say a ritual bestowing supernatural grace, using the same form of baptism already familiar to the Jews.

The purposes of Christian baptism are as follows: *Salvation*. Baptism is necessary for salvation rather like the 1st. M.B. is necessary for a medical qualification. You can get no further without it, nor without baptism can any of the other sacraments be received validly. Christ used baptism to initiate members into His Church. In a nocturnal conversation with the Jewish ruler, Nicodemus, He said: "Except a man be born of water and of the Spirit, he cannot enter into the Kingdom of God." (John iii 5). The precise time of the institution of baptism as a sacrament by Christ is not known. Certainly by the time of the Pentecost the precept of receiving baptism became binding upon mankind and the ritual

has been performed since the Church's earliest days. *Remission of sin*, both original and actual. Original sin like congenital disease is sin traditionally inherited after the fall of Adam, though not specifically alluded to by Christ. And actual sin like acquired disease is sin committed by the person in question during his life. *It imparts supernatural grace to the soul*. This comes direct from God, sanctifying the soul and giving it strength to resist evil temptation. *It imprints a special character or seal on the soul* and hence the sacrament cannot be repeated.

There arises the question of the child who dies in infancy. If he has been baptised he goes straight to eternal bliss, since he is without original sin and has committed no actual sin to merit punishment. If he is unbaptised he cannot enter heaven, yet he has done nothing to deserve eternal torment. His soul is immortal whether baptised or not. What then is his fate?

The Church teaches that an innocent though unbaptised soul can never see God, but nevertheless spends eternity in a state of perfect natural happiness in Limbo. This comes from the Latin "*Limbus*" or fringe, a word used in the Middle Ages to denote the outskirts of hell where the just, who died before the coming of Christ, are painlessly detained until released by His Resurrection.

At first sight this may seem a somewhat cruel doctrine, all the harder to accept these days where social thinking tends to be expressed in terms of collectivism and the abolition of individual privileges. It is easier to comprehend if we realize that heaven is not included in any charter of human rights, but is a gift which God in His infinite goodness has made available to those worthy to receive it. If it is withheld from an unbaptised infant there is no injustice done, provided no suffering is inflicted upon the innocent soul. If the soul has never set eyes on God it cannot regret not being with Him, any more than an aborigine can miss the amenities of western civilization having never experienced them.

In its simplest form baptism consists of pouring or sprinkling water over the head of the child at the same time saying the words: "I baptize you in the name of the Father, the Son and the Holy Ghost." In church the ceremony is more complex and includes the anointing of the head and chest with chrism and oils to symbolize union with Christ. If the recipient is an adult he is required to

recite the creed and renounce evil. In the case of a child this is done through sponsors. Baptism on a sick bed is sometimes called Clinical Baptism, though this term refers more particularly to adults who did not receive the sacrament in their childhood.

The usual minister of baptism is a priest, but in case of necessity, e.g. when there is danger of the child dying unbaptized, anyone may administer the sacrament if a priest is not readily available. Tertullianus expressly states that baptism can be given *by all*. Even a Jew may baptize in an emergency if he intends to do what Christ ordained. This extreme licence demonstrates the importance with which baptism is regarded by the Church.

Michael Scott was admitted from Bart's District on November 28, 1954, at the tender age of one hour. A bifid spine was noticed at birth and since his mother did not wish to feed him there seemed no point in delaying his admission. On examination he looked fairly fit, but there was a large meningocele in the sacral area and the skin overlying the tumour was bruised and erythematous. Pressure on the meningocele produced no impulse at the anterior fontanelle. The circumference of the head was 13½ inches. The muscles of the lower limbs were paralysed and greatly hypertonic, and the knee and ankle jerks were accentuated indicating upper motor neurone involvement. There was no plantar response and the patient suffered from true incontinence.

Within ten days he had gained weight and cerebrospinal fluid had ceased to ooze from the sacral mass although it appeared larger. A surgical opinion was obtained but the lesion was deemed too extensive to warrant surgical intervention.

On December 23 the sulphonamides, which the baby had been having since the outset, were stopped and the pyrexia, which had persisted during the previous weeks, abated. By January 10 a purulent discharge was observed coming from the meningocele and the child started to have intermittent fits. These were adequately controlled by a course of intramuscular paraldehyde which was commenced a few days later.

A week later the meningocele seemed to have shrunk but the dreaded signs of early hydrocephalus were becoming manifest. The

Michael Scott is not the real name of the child.
—Ed.

cranial circumference was now 15½ inches and the sutures were well separated. Ventricular puncture showed a hazy, colourless, clot-free fluid containing 400mg. per cent. protein, 33mg. per cent. sugar and 687 polymorphs per cu. mm. The baby's temperature was now starting to fall more rapidly. Within a few days the cranial circumference had increased to 16 inches.

By February 7 he was beginning to have periods of apnoea alternating with periods of increased respiration and it was evident that life's candle was reduced to a glimmer. The unlikelihood of his having been baptised was also evident in view of his early admission and the disinterest of his parents, and I began to wonder whether the responsibility for carrying out the dictum of Tertullian should not fall upon my shoulders. Let me hasten to mention here that there has never been any connection between baptism and "faith healing". Baptism is a purely spiritual therapy and remissions in "hopeless cases" are extremely rare if indeed they have ever occurred at all, whereas after Extreme Unction, a sacrament specifically ordained to comfort the dying, health is occasionally restored.

By February 14 the child's condition had greatly deteriorated. He was now taking very little food and was wasted and dehydrated. Clearly if he was to be baptised at all

it was no longer safe to postpone the matter further. He was by this time in a room by himself adjacent to the main ward. I used tap water and an ordinary dropping pipette and, dressed in white coat and mask in the clinical atmosphere of Lucas ward, administered the sacrament to the sleeping infant. The ceremony lasted I suppose five seconds. At least there was no more that could be done.

On the morning of March 1 he died. He had lived a little longer than was expected, but his temperature had dropped progressively to 90°F. in the preceding few days. Post mortem demonstrated the meningo-myelocoele and disclosed a blockage in the fourth ventricle, which presumably gave rise to the hydrocephalus.

Science cannot prove that life after death exists, or if it is a reality what form it will take. Science can tell us much about ourselves and the world we live in. There comes a point, however, when science can take us no further, and that is when philosophy and faith are important. The medical profession taken as a whole is not renowned for its spiritual fervour, but it would be a pity if a scientific training were inevitably to carry in its wake a devotion only to materialistic dogmas. Let us hope that Michael Scott has reached that place of contentment to which even the most sceptical of us secretly aspire.

Births

TAYLOR.—On April 15, at Berega, Tanganyika, to Joan and Dr. Joseph Taylor, a daughter (Priscilla Helen).

BRADY.—On April 29, to Margaret and Dr. Thomas Brady, a son (Patrick John).

SLACK. — On April 29, to Joan and Dr. W. W. Slack, a son.

Engagements

SHERE—GARRAD. The engagement is announced between Dr. Stanley Shere and Dr. Frances Elizabeth Garrad.

POYNTZ-WRIGHT—POLITZER. The engagement is announced between Mr. Richard Poyntz-Wright and Miss Caroline Politzer.

Deaths

BATT.—On May 22, Dr. John Dorrington Batt, M.C., Qual. 1914.

BELLWOOD.—On April 17th, Dr. Kenneth Benson Bellwood, O.B.E., aged 64, Qual. 1917.

GRIFFITHS.—On May 8, Cornelius Albert Griffiths, F.R.C.S., aged 90. Qual. 1889.

GURNEY. — On May 25, Dr. Alexander Cecil Gurney. Qual. 1894.

MOLESWORTH.—On April 10, Theodore Henderson Molesworth, M.B., F.R.C.S., aged 82. Qual. 1898.

Change of Address

DR. C. R. HART to Goldthorns, Yaxley, Peterborough.

THE LINEAR ACCELERATOR AT BART'S

by PROFESSOR J. ROTBLAT

ON APRIL 27, H.R.H. the Duke of Gloucester formally inaugurated the linear accelerator recently installed in Charterhouse Square. The ceremony, which was attended by many of the Governors, senior Hospital and College staff and outside guests, marks the beginning of a programme of research unique of its kind in a hospital, and which puts Bart's again in the forefront of radiotherapy.

X-Rays have been used for the treatment of tumours ever since their discovery in 1895. Throughout that period there has been a notable tendency to use more and more penetrating radiations, as these make it possible to irradiate deep-seated tumours without too much damage to superficial tissue. The standard radiotherapy equipment used nowadays in hospitals is based on an X-ray tube working at 250,000 volts. In 1936 Bart's was the first hospital in Europe to enter the "super-voltage" field by installing the one million volt X-ray machine in the Sassoon Department. This machine, which probably has the longest uninterrupted period of service of any X-ray equipment, is still in operation and up to date has been used for the treatment of over 3,000 patients.

Bart's example was later followed by some other large hospitals who also acquired super-voltage machines. This trend became particularly marked in the post-war period when, thanks to the remarkable achievements in nuclear physics, several new devices to produce X-rays of a very high energy have been developed. Among these devices the linear accelerator was found to have many advantages which made it particularly suited for radiotherapy work: the most important advantage is the combination of a high energy with a high intensity of the X-rays. Several such accelerators, producing X-rays of an energy of four million volts, were ordered by the Ministry of Health and are now being installed in hospitals in Great Britain. One accelerator, working at eight million volts, is at the Medical Research Council Unit at Hammersmith Hospital. The machine at

Bart's, which can produce X-rays up to an energy of 16 million volts, is so far the most powerful of its kind to be installed in a hospital.

Principle and Operation of the Accelerator.

The linear accelerator is, in principle, a device to accelerate electrons so that they acquire a very high kinetic energy. As the name implies, the electrons are accelerated along a straight line. Although at the end of their run the electrons have the same energy as they would have had after passing through a potential difference of up to 16 million volts, no such high voltages are employed; in fact, the highest potential used is only 50,000 volts. The acceleration is achieved by means of a radio-wave which is made to travel along a 20 ft. long tube, the so-called waveguide, which is the heart of the machine. The velocity with which the waves travel can be varied by means of corrugations, or diaphragms, placed at intervals inside the waveguide. The diaphragms are so arranged that the velocity of the radio-wave is steadily increasing as it travels along the tube. The electrons are produced in the "gun," in a similar way as in an ordinary X-ray tube or radio valve, by heating a tungsten filament to a high temperature. The 50,000 volts applied to the gun accelerate the electrons to a velocity of about two-fifths of the velocity of light. The radio-wave in the guide, near the gun end, is made to travel with the same velocity, so that the electrons entering the guide are carried by the wave and ride on it, in much the same way as a surf rider is carried by an ocean wave. The increasing speed of the wave causes the electrons to move faster, and by the time they reach the other end of the tube, which takes only about one forty millionth of a second, the electron velocity is 99.95 per cent. of the velocity of light.

The radio waves are generated in a magnetron, a special high-powered valve which produces waves of a frequency of 3,000

megacycles per second. The waves are generated not continuously but intermittently, in pulses of very short duration; these pulses can be repeated at any desired frequency, from 10 to 500 per second. Although the mean power consumption of the radio-frequency system is quite low, about five kilowatts, the power in the pulse is very high, about 2,000 kilowatts, and over 40 per cent. of this can be delivered to the electron beam. The linear accelerator is thus the most efficient of all accelerating machines.

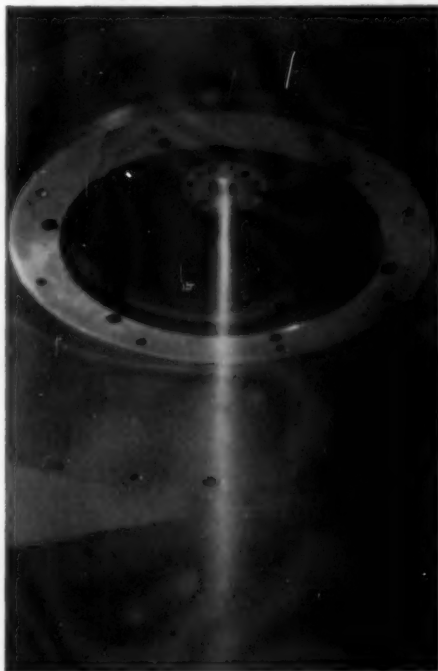
The accelerator can be operated from either of two positions: the Physicist's Control Desk or the Radiographer's Control Desk. The former contains a number of measuring instruments as well as a cathode ray oscilloscope by means of which one can check at a glance the working of any part of the machine. This desk is intended to be used only for starting up the accelerator and for the initial tuning. For routine operation the Radiographer's Control Desk is employed. This is situated at a greater distance from the machine and contains only those controls which are necessary for normal running of the accelerator.

Production of X-rays.

If the beam of electrons is made to strike a disc of a heavy metal, e.g. gold or platinum, X-rays are produced, which at this high energy are emitted mainly in the same direction as the electron beam. The electrons travel in the accelerator in a horizontal direction. For therapy purposes, however, it is desirable to direct the radiations at the lesion from different angles. To make this possible, as well as to provide other facilities required for treatment, an extra piece of equipment, the X-ray head, is attached to the end of the accelerator. The head contains a magnet by means of which the electron beam emerging from the waveguide can be bent through 90 degrees. In addition, the whole head can be rotated through an arc of 140 degrees, so that the radiations can emerge in any direction from 20 degrees on one side of the downward vertical to an angle of 30 degrees above the horizontal. For experimental purposes the electron beam can also be made to emerge in the straight through direction, without being bent by the magnet.

The X-ray head also contains various ionization chambers and other devices to measure the intensity of the electrons and of

the X-rays. Some of these devices are so arranged that they control automatically the energy of the emerging radiations and ensure that the X-ray beam maintains its direction. The size of the emerging X-ray beam can be varied by means of motor driven lead diaphragms; the aperture of the beam is rectangular, and at a distance of one metre it can be varied from zero to an area of 20 x 28 cm.



The beam of electrons emerging from the accelerator.

The X-ray output depends on the pulse repetition frequency employed and on the energy of the electrons; the latter can be controlled to some extent by varying the current from the gun. The graph of *fig. 1* gives the X-ray output, at a pulse repetition frequency of 500 per second, for various energies of the electrons. It is seen that at an energy of 14 million volt the output is 3,300 roentgens per minute at one metre distance. This is at least 10 times greater than the output available from any other radiotherapy set. At higher energies the output goes down, but even at 16 million

volts the output is still very high, about 1,100 roentgens per minute. Thus, although the machine is officially called the "15 million volt" linear accelerator, which was the figure originally aimed at, it can produce X-rays of higher energies.

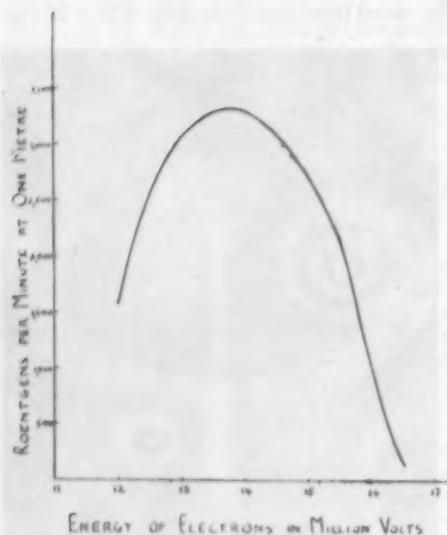


Fig. 1.—X-ray output as a function of electron energy.

New Techniques in Radiotherapy.

In addition to the generation of an intense beam of high energy X-rays, which will be used for the treatment of cancer in the conventional way, the linear accelerator provides the possibility of developing two new techniques in radiotherapy. One is electron therapy, in which the electrons themselves are brought out from the machine and used to irradiate the tumour. Electrons of an energy of 15 million volts can penetrate to a depth of 3 inches in tissue, and there are definite advantages in using such electrons, chiefly due to their finite range of penetration which ensures that the irradiated volume can be much better defined. The other possibility is neutron therapy. The bombardment

of uranium with electrons gives rise to a copious emission of fast neutrons. The effects due to the passage of neutrons through tissue are in many ways unlike those caused by X-rays, and the results of neutron therapy may therefore be quite different. In addition, it is easy to slow down the fast neutrons to the velocity of thermal agitation, and it is known that in certain cases it is possible to localize the therapeutic action of such slow neutrons in definite regions of the body.

In order to be able to select the different types of radiation which can be generated, the X-ray head contains a target holder which can be put in any one of three positions. In the first, there is no target, and the electrons emerge directly into the air. In the second, they are made to strike a platinum disc, resulting in the production of an X-ray beam. In the third they strike a uranium cylinder and the X-rays produced give rise to the emission of fast neutrons.

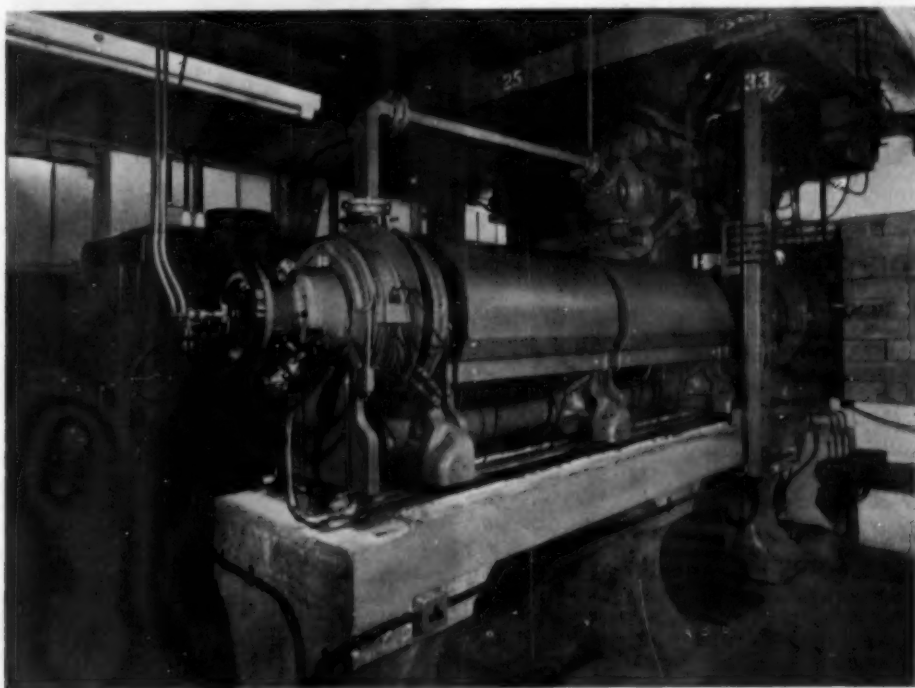
Research in Radiobiology.

Apart, however, from the development of the various radiotherapy techniques, it is intended to use the linear accelerator mainly as a tool for fundamental research into the action of radiations on living tissue. This is of particular importance at a time when the release of radiations, either in war or in peace, may influence the future of mankind, and when it is therefore essential to have a full knowledge of the effects produced by radiation in the living organism. As yet little is known about the detailed mechanism of the destruction of cells by the passage of ionizing radiations. The linear accelerator lends itself particularly well to such investigations, mainly due to the pulsed character of the radiations it generates, and to its capability of delivering momentary doses of radiation at an exceedingly high rate.

The electrons are emitted in a series of short bursts, each lasting about a millionth of a second; when tuned to optimum output, each pulse contains about 400,000 million electrons. Since the whole of the emerging electron beam is contained in a circle of 1 cm. diameter, it follows that one pulse of electrons can deliver a dose of over 15,000 roentgens. This corresponds to a dose rate in the pulse of 700,000 million roentgens per minute, or, at a repetition rate of 500 pulses per second, to a mean dose rate of 500 million roentgens per minute.

These features open the possibility of studying effects caused by radiation within a very short time interval after it has been delivered, since even one pulse of radiation is sufficient to produce an observable effect. In addition to the study of the kinetics of various reactions produced by radiations, the speed at which the various secondary processes occur, and the effects resulting from the application of greatly increased dose rates, lend themselves to investigation. Apart from providing a better understanding about the way in which radiations affect living tissue, such studies may also lead to new

gives rise to the formation of free radicals. In the living organism these radicals may be responsible for the various chemical reactions which ultimately lead to the destruction of the cell. The life-time of the free radicals in tissue is so short that it has been impossible to study them in detail so far. It is hoped to measure the life-time of these radicals by means of their absorption spectra. For this purpose pulsed light sources have been developed which give intense flashes of light of about one microsecond duration. These flashes are synchronized with the pulse of radiation so as to obtain a series of absorp-



The first three sections of the linear accelerator showing the gun, the rectangular waveguide, the magnetron and the modulator.

ways of protection from radiation, as well as to improved methods of radiotherapy.

One of the first experiments to be carried out in radiobiological research is an attempt to identify the short-lived chemical products formed as a result of irradiation. It is known that the passage of radiation through a liquid

tion spectra at various intervals after the irradiation. In order to analyse the spectra, a high speed rotating mirror with frictionless bearings has been built.

In another series of experiments, in collaboration with Professor Wormall, the effects of radiations on tissue enzymes and on serum

complement are being studied with the aim of determining whether any inactivation of them is caused by the action of the radicals. The relationship between dose rate and the biological effect on the living cell is to be studied by the use of the tissue culture technique in collaboration with the Strangeways Research Laboratory at Cambridge.

In order to carry out these investigations a number of new facilities were required and the accelerator has been correspondingly modified.

The very high output of radiations means that for many experiments the time of exposure would be very short; in fact, too short to be controlled by a mechanical device such as a clock. For this reason, a new method of terminating exposures has been devised, in which the number of pulses to be delivered can be preset. A special electronic device was designed and built in the Physics Laboratory, by means of which the exposure is terminated after any predetermined number of pulses, from 1 to 9,999. For many radiobiological experiments single pulse exposures will be employed and a separate facility for this is provided.

To avoid possible variations of intensity in the individual pulses, which may occur when the radio waves are switched on, the accelerator has been modified to include a deflecting device near the gun end. By means of this device the electron beam is deflected and prevented from passing along the accelerator until stable conditions have been attained.

Housing of Accelerator.

In order to complete the basic studies on radiation effects and on new radiotherapy techniques in the shortest time, it was decided to devote the next few years entirely to research work. During this period it is not intended to treat any patients, and for this reason the linear accelerator has been installed in a temporary building in Charterhouse Square adjacent to the Physics Tower. The site of the building is a pit, which during the war served as an Emergency Water Supply, and the machine is situated below ground level. This ensures a certain measure of protection from the radiations, but the main protection comes from the thick walls of concrete which surround the X-ray head. A detailed survey has shown that in the control rooms as well as in the neighbouring

buildings the level of radiations due to the accelerator is well within the safety limit. The control circuit contains a number of safety devices which would automatically stop the operation of the machine should anybody enter the accelerator room.



The X-ray head.

The linear accelerator at Bart's is so far the only large size equipment in a hospital to be devoted to full time research in radiobiology. It is also unique in another respect. Unlike most other major research projects which are financed from Government funds, this machine was purchased from the Discretionary Fund of the Hospital, which also maintains the research work with it. The whole credit for promoting this project goes to the Treasurer, Sir George Aylwen, and the Board of Governors, whose enlightened attitude and appreciation of the value to clinical medicine of long term academic research have made possible the launching of this important programme of investigations.

THE CHAMBERLAINS' SECRET

by P. J. BEKENN AND J. F. PIGOTT.

IN the Middle Ages midwifery had returned to a primitive state, and there was no means of saving mother or child in a difficult labour. Nature was allowed to take its course. Little was known of the mechanism of birth as the place of knowledge was taken by a mixture of folklore and superstition. The teachings of the Greek, and the majority of the Roman physicians, had been forgotten long since. At this time midwifery was controlled by the Church and by the midwives. The Church's teaching was based entirely on Galen's, which, however mutilated by translation, was accorded biblical authority. Galen said the womb was double horned, therefore it was. To suggest that Galen was wrong made the speaker a proper subject for interrogation by the Holy Office.

Salerno was the most famous School of Medicine in Europe during the 11th Century. From this University came Dame Trot of Nursery Rhyme fame, who wrote a series of books known as the Trotula. The Trotula were not very good, e.g. the following treatment is recommended for difficult labours: "When there is a difficult labour with a dead child, place the patient in a sheet held at the corners by four strong men, with her head somewhat elevated. Have them shake the sheet vigorously by pulling on the opposite corners, and with God's aid she will give birth."

In fourteenth century England St. Bartholomew's Hospital was the centre of medical learning. Here John of Mirfield, a priestly scholastic, compiled his *Breviarum Bartholomei*. In this comprehensive work, John presented what he thought good and worthy of quotation from many well-known authorities. He mentions the wording of a charm which is to be written on parchment and worn by a pregnant woman in order to help her delivery.

Such learning as the midwives had was based on the teachings of St. Hildegard, who was Abbess of a convent in Germany. The good Abbess did present some simple direc-

tions for the hygiene of pregnancy and the puerperium, but was more concerned with her rules for suppressing sexual desire. Special songs were sung by the midwives to accelerate delivery. Exorcisms and incantations also had their place in the birth ritual.

The sixteenth century observed the rebirth of midwifery. In 1500 Jacob Nufer, a Swiss sow gelder, disappointed by the attempts of thirteen midwives to deliver his wife, called in two lithotomists. These gentlemen were expert at removing stones from the bladder, but were unable to shift this difficult child from its mother's womb. Jacob took his sow gelding instruments and did the obvious thing; the baby was delivered by Caesarean section and lived. The mother also survived, later giving birth to six more children without difficulty.

The next successful Caesarean section was performed in 1540, while in the same year a book on midwifery, *The Birth of Mankind*, was published by an English Physician, Thomas Raynalde. This book was the fountain head of English obstetric literature and influenced the practice of midwifery for three centuries. In 1551 Ambroise Paré published his brief *Collection Anatomique*. Here Paré describes the operation of Podalic version which had been forgotten since A.D. 200. Paré was the greatest surgeon in France, but did not think it beneath his dignity to attend a woman in labour. In his way he brought the practice of midwifery out of the dark ages doing what he could to instruct the midwives.

At this time France was torn by religious strife as the Huguenots, led by the Prince of Condé battled with the Catholics, led by Catherine de Medici. Many Huguenots emigrated to England after the battle of Jarnac in 1569. Among the emigrés was Dr. William Chamberlain, who settled in Southampton with his wife and three children. He resumed medical practice there, and it is known that he taught medicine to his sons, who were "nursed up as from the cradle to all parts of Physick".

In 1572 occurred the massacre of St. Bartholomew's Eve. After this the Chamberlains could never hope to return to France. Dr. William Chamberlain moved to London leaving his eldest son, Peter I, to carry on in Southampton. Eight years later Peter I heard that his father had died, so he left Southampton to rejoin the family. His younger brother Peter II had followed his father's profession, and was a member of the Barber-Surgeon Company. Peter I decided to join the company as well. He could only do so as a foreign member, since he had not been apprenticed to a member of the company. He had to submit to an oral examination; "touching his skill in the generative parts of women, and bringing to bed of women in their dangerous and difficult labours." This was one of the many subjects on which his knowledge was tested. After paying his fees: seven guineas for the examination; twenty shillings to the clerk for his diploma; twenty shillings to the company's poor box; and five shillings to the Beadle; he was entitled to hang up his striped barber's pole with a basin hung on the end. This he did in Blackfriars, his younger brother having already set up his pole in March Lane.

They were soon in trouble with the Company, however, and were fined for not attending lectures, which were compulsory. They also came into conflict with the College of Physicians. The College considered that they alone were competent to prescribe medicines, and that the Barber-Surgeons were subservient to them, only fit for such menial tasks as the physicians prescribed. Dr. William Harvey, when he drew up the regulations for St. Bartholomew's Hospital, ordained that "no surgeon give inward physick without approbation of the doctor."

The Chamberlains had no hope of becoming Fellows of the College of Physicians since an Oxford or Cambridge doctorate was a necessary qualification. Peter I was actually imprisoned by the College, although he was surgeon to King James I. He was saved by the Queen, who sent the Archbishop of Canterbury to rescue him from Newgate. Peter II fell foul of the College when he sent the following petition to the King: "That some order may be settled by the State for the instruction and civil government of midwives". Both brothers supported the humble petition of the midwives that "the said midwives be incorporated and made a society". In the College

records it states that "Peter II did impudently advocate the cause of these women". They dismissed as an idle boast his claim that "he and his brother and none others excelled in the practice of midwifery."

Peter II's son, Peter III, was sent to Emmanuel College, Cambridge, in 1615, at the early age of fourteen. He left Cambridge and went to Heidelberg and Padua, at the latter University he received in 1619, the degree of Doctor of Medicine. He then returned to England. And in 1620 he "wore his scarlet under the worthy professor of Oxford, and the next year under the Doctor of the Chair at Cambridge." At the age of twenty he was Doctor of Medicine at three Universities: Padua, Oxford and Cambridge. At this time he wrote "my degrees seemed big unto myself and dyed my cheeks with the reflection of my red robes." He applied immediately to the College of Physicians for admission, but it was recommended that he should wait awhile and try again. Seven years later, in 1728, he was admitted, though admonished by the president "to change his mode of dress and not to follow the frivolous fashion of the youth at court, but to conform to the Custom of the College and adopt the decent and sober dress of its members."

The royal favour bestowed on Peter I was transferred to Peter III when his uncle died. Peter III had taken over the duties of Surgeon to the Royal Household before he was officially appointed. In that year, 1630, he attended the Queen when Charles the Second was born. Peter III maintained the family tradition in other ways as well, and was soon involved in the struggle to educate and instruct midwives. Like his father and uncle he was soon in trouble with the College. In 1634 Mrs. Hester Shaw and Mrs. Whipp presented another petition for the incorporation of midwives; they also took the opportunity of complaining that Dr. Peter Chamberlain made the midwives meet at his house once a month, although he had no authority to do so. He was bent on having the sole power of licensing midwives "out of an opinion of himself and his own ability in the art of midwifery." A more serious charge was that he had threatened "he would not repair unto such women as are distressed whose midwives had refused to conform to him." The petition was addressed to "The Right Reverend Bishops under whose jurisdiction the petitioners are, and to whom the licensing of your petitioners do belong." The enquiry



Paul Chamberlain, M.D.

An engraving, published by Richardson in 1794, based on a portrait of doubtful authenticity. The former is in the British Museum.

that followed was conducted by the Archbishop of Canterbury and the Bishop of London; they condemned Peter Chamberlain's actions, and made a ruling that he should "forthwith be a suitor to the Lord Bishop of London for licence to practise midwifery." This was a firm rap on the knuckles and a reminder that, under an act of King Henry VII, the fellows of the College of Physicians had the right to "practise Physick in all and every his members and parts." There being no reference to any female parts, for the Church had maintained a vested interest in these for nearly a century. The system of licensing in London was such that no matter how well qualified a man was, he could not practise midwifery without a

licence from the Bishop. Peter III was disgusted and wrote, "the burden of all the midwives in and about London lay only on my shoulders."

Midwifery was still a woman's art when the Chamberlains started in practice, for there was great prejudice against men attending the lying-in chamber. The midwives may have hated the Chamberlains, but the results that the family achieved with their secret instrument were so good, that they were soon imploring them to come and attend the mothers who were in difficulty. The Chamberlains were prepared to go to fantastic lengths in order to preserve their secret. They arrived at the house in a special closed carriage, and with them came a huge wooden

box adorned with gilded carvings, it was so heavy that it took two men to carry it. The lying-in chamber was cleared of onlookers, the woman in labour blindfolded, and only then was the box opened. Only the Chamberlains were allowed inside the locked room, but through the door the terrified relatives could hear peculiar noises, ringing bells and other sinister sounds as the secret went to work.

The secret was talked about by the public, scorned by the College, and derided by the midwives; but nobody could deny that from Peter I onwards, the Chamberlains had some extra skill that made for obstetric success. Dr. Peter Chamberlain, Peter III, entrusted the secret to three of his sons, Hugh, Paul and John. Little is known of John but Paul practised midwifery and became a noted quack. He invented a necklace of small beads, which he asserted, facilitated the cutting of teeth in infants; it sold for five shillings. Hugh, on the other hand, played, a large part in the history of midwifery; he held a licence to practise midwifery from the Bishop of London and he was one of the few doctors who stayed in London during the plague of 1665. He lived in a court just off the Old Bailey.

In 1670 Hugh visited Paris where he met Mauriceau. Hugh was prepared to sell the family secret to the French government for ten thousand pounds. Mauriceau was educated at the Hotel Dieu and practised in Paris; he was known as "the oracle of the obstetricians of the century." He heard of Chamberlain's success with difficult cases and decided to give the instrument a trial. He had under his care a badly deformed rachitic dwarf of 28, well on in labour with her first child. Mauriceau had found the foetal head high above the deformed pelvis with its face forward. It seemed a hopeless case, and he took the view that if Chamberlain could deliver this baby he must have something worth buying. Chamberlain tried. The patient was in bed and all manipulations were done under the bedclothes, however, he managed to apply the secret instrument to the head, which was a remarkable feat in itself. He laboured unceasingly for three hours without pause. At last he had to admit defeat.

Hugh returned to England and the secret remained in the family. He admired Mauriceau, and translated his *Accomplished Midwife* into English with additional notes. He complimented Mauriceau on his skill, but

deplored strongly the delay in delivery advocated by him, and the techniques he employed in difficult labours. (He perforated the child's skull and delivered it piecemeal using blunt or sharp hooks). He said that Mauriceau lacked the Secret, and rather apologetically went on to say: "there being my father and two brothers living that practise this art, I cannot esteem it my own to dispose of, nor publish, without injury to them."

His father died in 1683, leaving the three brothers to carry on the family tradition. Hugh was already teaching his son, Hugh Junior. The family still attended the Royal Household and it was Hugh Senior who was involved in the Warming Pan Scandal. It was said that the wife of James the Second, who was brought to bed a month early, had been delivered of a stillborn infant and that a live child had been secreted into the Palace in a warming pan and an exchange made. Unfortunately Hugh arrived an hour late and could only testify that the baby was newborn.

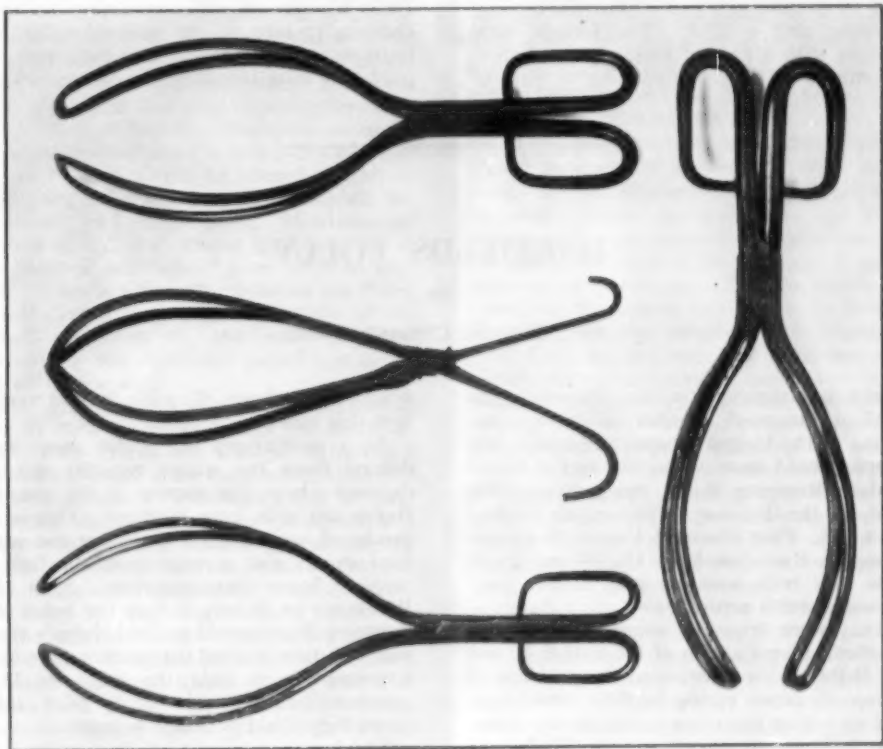
It can not be said that the Chamberlains lacked public spirit; they were great planners and schemers. The Peters had tried to organise the midwives. Peter the third had suggested to the House of Lords that he should have a monopoly of the manufacture of baths and bath stoves. His more ambitious scheme was "to clothe all the poor of England" by making into one common stock all debts due on public accounts, all waste lands, commons, mines, and the profits of manufactories, engines, inventions and a host of other things. Other ideas were labour houses for robbers and thieves, setting up a Public Bank, and erecting an academy for the education of youth.

Hugh senior advocated a public health insurance scheme. A small annual levy was to be made on each house. The scheme embraced rich and poor alike, providing full medical and surgical service for all diseases except the pox, midwifery, and cutting for stone. For the last three calamities there was to be a small extra charge. This was because "deliveries require mighty pains on the part of the accoucher"; the operation for stone was not only dextrous but required much attendance; and in the case of pox there was an extra charge so that "it might not hereby be encouraged." His most important proposal was to "make England rich and happy" by means of what was called the Land Bank. It was based on rather shaky

economic foundations and inevitably crashed. Hugh had to retire somewhat hastily to Holland on suspicion of debt. This was in 1699, and in the same year a verse was published by an anonymous author entitled:

Hugh stayed in Holland for the rest of his long life and died there in 1726.

Hugh junior remained in England. It is thought that he did not use the secret to any great extent. He became the Duke of



The Chamberlains' Secret

The forceps found in Woodham Mortimer Hall are now at the Royal Society of Medicine. From the facsimiles in the Wellcome Collection.

"Hue and Cry after a Man-midwife who has lately delivered the land-bank of their money." It describes the disappearing doctor in unkindly terms:

He's a little old man very pale of complexion
Into many deep things makes a narrow inspection.
His head's very long and his hand's very small
Fit to fathom a gentle Tuquoque withall.
To give you his character truly compleat
He's Doctor, Projector, Man-midwife and Cheat.

Buckingham's personal physician and died in Buckingham Palace in 1728. Perhaps because he had no sons, or because medical ethics were changing, he allowed the family secret to leak out. For, five years after his death, Edmund Chapman made public the design of the Chamberlain forceps and their method of application. It was not until nearly a hundred years later that the secret instruments themselves were discovered. During 1813, in an attic in Woodham

Mortimer Hall, near Maldon, a loose floor board was found which revealed a trap door. Hidden under this was a chest containing a pair of old fashioned ladies gloves, letters, fans, trinkets, a packet containing a tooth labelled, "my husband's last tooth," and the Secret—three sets of midwifery instruments, each set containing a pair of obstetric forceps, a vectis, and a fillet. The forceps were straight with a pair of metal spoon-shaped, fenestrated blades, united like a pair of

scissors, and having curved scissor handles. Slight modifications appear in the three forms.

Peter III had retired from London after his fights with the authorities to live at Woodham Mortimer Hall and practise midwifery at peace in the country. After his death in 1683, his second wife, possessing no male children to take up the profession, hid the instruments in the attic. There they remained until they were found over a 100 years later.

HADFIELDS FOLLY

by

OUR ROWING CORRESPONDENT

WHEN DISSATISFACTION was expressed in 1953 at the small number of crews competing in the United Hospitals Regatta, few people would have suspected that it would lead to Bumping Races being successfully held on the Tideway. The events leading up to the First National United Hospitals Bumping Races on May 18, 19 and 20 at Kew, are both amusing and bizarre, and certainly worth setting down.

They were originally suggested by James Hadfield, then Captain of the U.H.R.C. and S.T.H.B.C., as a solution to the problem of giving all crews racing in their own class, and to encourage more crews on the river. The first site proposed was the Thames at Kingston. But expense made this impracticable, and the question arose whether the races were feasible on the Tideway. A few were honest in their objections: bumping was a debased form of racing, made necessary elsewhere by the narrowness of the Fenland ditches and the streams at the source of the Thames. The majority were amused and sceptical, having visions of death and disaster in the inevitable shambles. The few enthusiasts believed that the original objection might be true of the foundation of such races at Those Other Places, but that the results of such racing justified trying them on a river where the geography did not make them imperative. Some experience of Bumps at up-river schools, who

practise both forms of racing, tended to confirm this view.

As a preliminary the Eights races were deleted from the winter regatta, and the decision about the nature of the summer Eights left to a later meeting. This alone produced an increased entry for the small boat events and a very good standard of racing. Some encouragement from the Watermen at Putney led to the belief that Bumping Races could be held cheaply there, and with this in mind the meeting appointed a committee to hold the races in May, together with any University of London crews they could persuade to enter.

The fun then began. A starting place at Hammersmith was found which was exposed for a sufficient length of time at low tide, a course was decided upon, and the blessing of the Port of London Authority obtained. The latter, far from being official and obstructive, was most helpful. Consultations taking place in a splendid launch off Lambeth Pier. Dr. R. J. Blow, L.M.B.C. and S.B.H.B.C. gave a lecture to coxes pointing out the intricacies of Bumping races.

Then came a blow. The boatmen at Putney, upon whom so much depended, reported that they would be occupied on the chosen dates with preparations for a Regatta. Moreover, the other rowing clubs who were competing in this Regatta did not react favourably to the idea of dodging the Bump

crews. So a change of course was vital. Once more the committee plodded through the sand and mud at low tide; this time in the neighbourhood of Kew Gardens. The stretch seemed suitable. A shot gun was taken along in order to find out how far the sound would carry. The enthusiastic gunner used a 12 bore Magnum and tried a double discharge with 3 inch cartridges. The acoustic effect was satisfactory; but, as the recoil cut his finger and nearly broke his nose, some other method of starting the crews was deemed advisable. Meantime sustained antagonism from the University College and Hospital coach played an important part in frightening off many, and eventually all, the University of London crews. However, the captain of U.L.B.C. placed his boathouse at our disposal and himself gave valuable support. Then a scare arose because the River Police gave a very different version of the Tides' behaviour on the selected dates. Fortunately the difference turned out to be one of terminology.

The next problem was the crucial one of how to start the crews. And one morning, armed with an iron bar, a length of rope and a chock of wood, some members of the committee met the St. Thomas's Eight at Kew for a trial start. In a strongish wind and fast stream considerable difficulty was experienced in holding the crew, and at the first attempt the eight went straight into the bank. However, by trial and error, a workable scheme was established; two waders holding each crew. A boatsmith was commissioned to make the lines, stakes, bungs, and also rubber balls to fit to the prows of the boats.

Meanwhile, attempts to get a Clock Firm to provide an Official Clock, and to get the H.A.C. or Yacht Clubs to provide suitable cannons met with no success. Further shooting trials were carried out to test the effect of cartridges without balls. These were unsatisfactory, and black powder blank seemed to be the only answer. Then R. W. Lister, the captain of U.H.R.C., contacted the C.U.B.C. and obtained permission to borrow the University cannons. Accordingly he set out for Cambridge with another Committee member in the latter's car the day before the races. Arriving in Cambridge rather late, one tyre went flat. And the drivers were a little upset to see two bullae in the spare one. However they set off again to find the Secretary of the C.U.B.C. who had apparently gone out sculling. After a hectic chase down the

river bank, he was eventually intercepted at Grassy Corner and the necessary information extracted. Then, while the driver mended another puncture which the chase had produced, Lister fetched the cannons by taxi. And very late they set off for London. Somewhere near Hatfield they got yet another puncture which they wearily mended. Shortly after setting off again there was a loud report, and the car waltzed crazily to a standstill with an eviscerated tyre. Frantic phone calls and fervent prayers were made and the remaining tube patched up. In the gathering gloom they set off once more, only to be rudely stopped after another quarter of a mile by another report and burst tyre. As if the cannons possessed some malevolent hoodoo, the elements joined in the fray and a heavy snow storm developed. The car had to be towed on two wheels to a garage in Potters Bar, where another member of St. Thomas's Boat Club fetched two very cold, wet and disconsolate individuals, and two brass cannons, about which they were rapidly becoming paranoid. A less promising eve to the event can hardly be imagined.

Nevertheless, in somewhat chilly and changeable weather, shortly after 5 p.m. on May 18, a quorum of crews, constituting the second division of the United Hospitals Bumping Races, assembled on the Surrey bank opposite Syon House. They were marshalled by Mr. Jeremy Debenham, a former Assistant Secretary of the C.U.B.C., who, as befitted his legal status, dealt with all crises with admirable presence of mind and impartiality. The genie of the cannons had nearly exhausted his resources, and, with but one misfire, was rammed into submission by P. J. Scott. Thus, to a magnificent roar of smoke and flame, the boats were precipitated into the stream, and went headlong down the ebb tide after each other.

The first guns were fired by a fellow of the Royal College of Surgeons, Mr. Frank Law, C.U.B.C., L.M.B.C., and the first bump was scored very shortly afterwards by St. Thomas' IV, coxed by a Fellow of the Royal College of Physicians. Bart's considered it unnecessary to deny the subsequent rumour that they were going to embark an eminent gynaecologist, who could be counted upon to sink the first crew to founder in the races. Bart's III went off to a fine start, and, there being a bump in front of them, had no difficulty in maintaining their position at the bottom.

In the first division, Bart's I started second and Bart's II fifth. The order of starting was arranged arbitrarily by the Committee, based as much as possible on the performances of the crews in the racing the last time the cups were competed for, some 18 months earlier. At that time Bart's II contained three oarsmen who had rowed at Henley, thus they were now placed in a high position which they could not reasonably be expected to maintain. On the first night they were bumped by St. Thomas's II, and on the next night by Middlesex I. On the last night they surpassed themselves and kept away from Westminster I.

On the first night St. Thomas's I failed to take advantage of the tide and Bart's I got within a quarter of a length, but, largely owing to inexperience of this type of racing, failed to press home this advantage. On the next night St. Thomas's went away, Bart's closing at the finish to just outside their distance. On the final night, Bart's went off fast and got to about one length from St. Thomas's who drew away again and finished at about their distance after a good race. On each night Guy's, who were third, finished well outside their distance from Bart's. To the Third Eight went the honour of making the first bump for Bart's. For, in spite of '4' making last minute, nay, last second, adjustments to his dress, they managed to leave their stake at the gun and bump the London II. Although on the final night they could not catch St. Thomas's III, who had been bumped by St. Thomas's IV, (for which they were fined three guineas) they managed to keep away from their erstwhile victims.

The evil spirit of the guns was a hard one to lay, for on the second night it was apparent that powder was running out. Luckily the Metropolitan Police pushed through the procedure for a powder permit, which normally takes a fortnight, in time to keep the guns firing on the last night. Nevertheless disaster nearly overtook the guns of the first division on the second and third nights. On the second night the nimble fisted rugger player who was i/c Artillery contrived to discharge, by accident, the shotgun, held ready in case of emergency, between the one minute and zero guns, nearly filling his assistant's ear with wadding! On the last night the President's gold Hunter stopped after the minute gun, only the presence of mind of the Chief Umpire saved the division from chaos.

In spite of vicissitudes the races went off

without accident or serious hitch. By the third night a very fair order had been established. Perhaps a smaller distance between the boats will improve the racing, although this was in any case keen. Two things stood out. One is that the more crews there are the better. For every crew has a chance of making good. The other is that the number of spectators was disappointing. A small army of helpers was needed to get the races underway; pushing out, counting down, etc. For Bart's, members of the rugger club and others performed their somewhat chilly offices with commendable skill. It seems a pity that more people could not muster even a fraction of such interest in order to come and watch. However, there will probably be another time, and there *is* a pub on the course.

BUMPING RACES

RESULTS

	MAY	18	19	20
St. Thomas's I				
St. Bartholomew's I				
Guy's I				
The London I				
St. Bartholomew's II				
St. Thomas's II				
Middlesex I				
Westminster I				
St. Mary's I				
St. Thomas's III				
The London II				
St. Thomas's IV				
St. Bartholomew's III				

CREWS

- 1st VIII:** Bow, C. N. Hudson; 2, T. W. Bolton; 3, T. P. Ormerod; 4, D. A. Stainsby; 5, C. C. H. Dale; 6, J. F. Piggot; 7, D. H. Black; Stroke, D. A. Chamberlain; Cox, A. Geach.
- 2nd VIII:** Bow, C. B. S. Wood; 2, A. J. Allison; 3, P. Fenn; 4, M. Besser; 5, M. Hall; 6, R. Marshall; 7, J. Bartlett; Stroke, D. Thomas; Cox, D. King.
- 3rd VIII:** Bow, D. Sadlick; 2, J. Chaltrey; 3, J. Shaw; 4, A. Lytton; 5, D. Lamiman; 6, M. Sleight; 7, P. Weaver; Stroke, M. Burfoot; Cox, C. Bert.

LETTERS TO THE EDITOR

AN EAST END CLUB

Sir,—May I use the *Journal* to make an appeal for helpers for a cause of topical interest.

There is in the East End of London a club which attempts to cope with the problem of so-called "unclubbables," the socially maladjusted boys and girls who are so much in the news. From the point of view of society, the existence of gangs of these youths is a great and apparently increasing menace for which a solution is imperative. From the human angle, the needs of the individuals making up these gangs are no less great. The hideous social background from which so many of them emerge, and the pathetic downward path which they seem forced to follow, constitute a challenge which must be met by society itself.

The club, which is mixed and deals with all ages, is situated in a district notorious for its lawlessness. Its members, quite unable to accept the demand made by more orthodox clubs, find there an atmosphere which they can accept, where they are welcomed without question, and where, it is hoped, some progress may be made towards their social rehabilitation. The problems which this poses are immense and there is no simple answer to them. However, one overriding need is that these boys and girls may be given the opportunity to make ordinary friendly contact with normal decent people.

The club relies on a band of voluntary helpers who, for various reasons, have recently diminished in number. The need for more helpers is urgent, and if any readers, men or women, feel that they could afford one evening a week or fortnight at the club, with either the senior or junior group, it would be of immense value.

Will anyone who is interested please get in touch with me.

Yours, etc.,

The Abernethian Room. H. M. HOLDEN.

THAT SARCOPHAGUS

Sir,—There is a certain Roman sarcophagus which the many visitors to the Path. Museum on View Day will have passed. I do not object to sarcophagi, but I do object to the dust and other debris which fills and covers this one. Surely it was sufficient sacrilege to tear it from the ground during the excavations for the library, without subjecting it to the indignity of being neglected by generations [sic] of cleaners. There is also a shelf on which the dust is an appreciable fraction of an inch thick, and nearby a group of derelict show-cases, some of which have broken glass panes—presumably kicked in by disgruntled students on their way down to earth after lectures and P.M's.

May I enlist your support in seeing that this eyesore is cleansed, preferably before next View Day. For I do not think it consonant with the public's idea of hospital hygiene. The magnitude of the problem is not such that calculations of the 'seven maids with seven mops' variety need be entertained.

Yours faithfully,

OBSERVER.

The Abernethian Room.

THE AUGUSTINE SOCIETY

Sir,—A group of students have formed themselves into a Society with these objects:—

To learn and to live the Christian Faith according to the discipline of the Church of England.

To have a special duty of prayer for the patients of the hospital and for all its life.

To explore both in thought and in practice the right relation between religion and medicine.

This group whose main function is a corporate service of Holy Communion (on the first Thursday of every month at 8.15 a.m. in St. Bartholomew's-the-Less) is open to all communicant members of the Church of England who accept a simple Rule. The Society aims to hold occasional evening lectures and discussions to which all members of the College will be welcome. We will be glad to give more information to anyone, clinical or pre-clinical, who is interested.

Yours sincerely,

NINA COLTART,
F. J. C. MILLARD,
R. E. NOTTIDGE.

The Abernethian Room.

CHRONIQUE SCANDALEUSE

Ave,

Your columns within the last decade printed a letter, which my daughter's hound Cerberus was constrained to write to you, on the occasion of the disappearance of a column named after my daughter Persephone. I feel bound likewise not to let the occasion pass without some remonstrance. This column has grown to be one of the most important in the *Journal*, being a commentary and record of the day to day happenings in the Hospital, and makes the *Journal* different from other similar publications.

I cannot believe that no day to day happenings occurred in my favourite Hospital, nor that you were so bemused or besotted that you could not see them. Moreover, Zeus tells me that the blank spaces in the issue alone amounted to enough space for this column; to say nothing of a poem spread over a page, and a page of references which no-one but the author will read.

I can only assume that the inclement weather caused you to think that the winter months, during which Persephone reigns in Hades, had returned. I can assure you it is not so, and trust you will resurrect this column so dear to me.

You remain, sir,

My faithful servant,

DEMETER.

Mount Olympus. Delivered by Hermes.

EXAMINATION RESULTS

LONDON UNIVERSITY

FINAL M.B., B.S. EXAMINATION, April, 1955

Honours

- BERGEL, D. H.—Distinguished in Applied Pharmacology and Therapeutics.
 HURN, B. A. L.—Distinguished in Surgery.
 McDONALD, P.—Distinguished in Obstetrics and Gynaecology.
 STROUD, R. A.—Distinguished in Applied Pharmacology and Therapeutics, and Obstetrics and Gynaecology.

Pass

- | | | |
|-----------------|---------------------|-------------------|
| Arnold, D. L. | Bailey, R. D. | Berry, W. M. |
| Boxall, T. A. | Boyton, J. O. | Browse, N. L. |
| Bugler, R. A. | Burgess, E. H. | Cairns, D. A. O. |
| Clark, R. W. | Cunnigham, G. A. B. | Edmonds, C. M. D. |
| Evans, T. A. | Harris, W. G. | Grant, B. H. |
| Gray, A. J. | Fletcher, F. M. | Hick, B. D. |
| Jepson, B. A. | Lefford, M. J. | Macadam, F. I. |
| Malpas, J. S. | Menzies, I. S. I. | Montgomery, B. K. |
| Nerney, J. M. | Rees, E. L. | Robinson, M. R. |
| Smart, P. J. G. | Snow, J. T. | Staley, M. E. |
| Thoresby, F. P. | Wadge, D. A. | Wickham, J. E. A. |
| Witt, M. J. | Wyatt, A. P. | |

Supplementary Pass List

Part I

- | | | |
|-----------------------|--------------------|-----------------------|
| Ashbee, C. R. N. | Bott, M. M. L. | Dale, S. L. |
| Deering, R. B. | Fairclough, C. M. | Gordon-Watson, M. A. |
| Gray, J. M. | Hewer, R. L. | Irwin, M. H. K. |
| Langham, G. D. | Mann, P. E. | Nwachukwu, P. O. |
| Roche, D. W. | Sanford, W. | Stainton-Ellis, D. M. |
| Stainton-Ellis, J. A. | Taylor, C. G. | Taylor, J. H. K. |
| Walton, W. J. | Williams, J. C. L. | Wood, P. H. N. |

Part II

- | | | |
|-------------------|-----------------|----------------|
| Ball, M. J. | Catnach, T. B. | Ellis, C. D'A. |
| Hopkins, D. H. G. | Irwin, M. H. K. | Lytton, A. |
| Sharer, P. | | |

Part III

- | | |
|---------------|-----------------|
| Farrar, J. F. | Luscombe, A. H. |
|---------------|-----------------|

Part IV

- | | | |
|-----------------|-----------------|-------------------|
| Ball, M. J. | Catnach, T. B. | Ellis, C. D'A. |
| Farmer, D. B. | Farrar, J. F. | Hopkins, D. H. G. |
| Irwin, M. H. K. | Luscombe, A. H. | Sharer, P. |

CONJOINT BOARD FINAL EXAMINATION, April, 1955

Surgery : Boxall, T. A.

Mr. T. A. Boxall has now completed the examination for the Diplomas M.R.C.S., L.R.C.P.

PH.D. EXAMINATION, April, 1955

Lacy, D. (Science)

L.M.S.S.A. FINAL EXAMINATION, May, 1955

Surgery : Mehta, P. C.

RECORD REVIEWS

HOMAGE TO FRITZ KREISLER. Campoli (Violin) with Eric Gritton (piano). Decca LT 5012.

Side 1: Praeludium and Allegro ("Pugnani," arr. Kreisler), Liebesleid and Liebesfreud (Kreisler), Polichinelle—Serenade (Kreisler), Schön Rosmair (Kreisler), Caprice viennois, Op. 2 (Kreisler), Tambourin Chinois, Op. 3 (Kreisler).

Side 2: Minuet in G (Paderewski, arr. Kreisler), Caprice in E flat; Caprice in A minor (Wieniawski, arr. Kreisler), Rondine on a theme of Beethoven (Kreisler), La Chasse ("Cartier," arr. Kreisler), La Gitana (Kreisler), Danse espagnole (Granados, arr. Kreisler), Variations on a theme of Covelli (Tartini, arr. Kreisler).

Fritz Kreisler, now eighty years old was one of the world's greatest violinists, and it was as a tribute to him on his eightieth birthday that Campoli made this recording.

All these pieces are well known on the concert platform, most of the shorter ones being favourite encores. Campoli undoubtedly has great affection for them, the caressing way in which he plays "Liebesleid" and "Liebesfreud" is most touching; he is also able to demonstrate his virtuosity in no uncertain way—his control of spiccato bowing and the accuracy of the double-stopping in "La Chasse" is amazing. All the pieces are delightfully played with loving care, but I think this recording is worth getting just for the performance of the Praeludium and Allegro: the sweeping melodic line of the Praeludium is played with such a rich singing tone and the Allegro is simply brilliant. A word of praise also for Eric Gritton for such a sympathetic unobtrusive accompaniment.

OPERETTA RECITAL BY HILDE GUEDEN, with the Vienna State Opera Orch. and Choir, conducted by Max Schönnh. Decca LXT5033.

This is a collection of popular soprano arias from various Viennese Operettas, interspersed with orchestral and choral items. An attempt at continuity has been made by joining the various items with bridge passages; and at unity by having "Wiener Blut muss was eigenes sein" at the beginning and end of the recording. Both are achieved, quite satisfactorily, for although there are a number of composers represented, their styles are all very similar.

On first listening to this recording I was immediately struck by the buoyancy of the whole performance; Miss Gueden, the chorus, the orchestra and the conductor, are so obviously enjoying themselves. It is light, sugary music. Miss Gueden sings clearly and accurately and it is pleasing to hear a female voice with such evenness of quality throughout its range. Reproduction is good. Thoroughly recommended for those who like this type of music—just the things to play on a warm summer evening!

GILBERT AND SULLIVAN: Princess Ida: The D'Oyly Carte Opera Company with the New Symphony Orchestra conducted by Isidore Godfrey. Decca L.K.4093 (4 sides).

During the war whilst on tour in the Provinces with some of the more popular operas, the D'Oyly Carte Opera Company stored the properties of Princess Ida in London. Unfortunately a bomb disposed of them. The Opera was then neglected, apart from a few amateur productions, until last year when it was revived at the Savoy Theatre with a new production. Now the Decca Record Company have made available on two L.P. 12-inch discs.

Only Act II on the second disc was received for review; Acts I and III being on the first disc (automatic coupling).

This Second Act is the best piece of recording I have yet heard done by the D'Oyly Carte Opera Company; there are no distressing lapses in intonation by the soloists which marred many of their previous recordings. The soloists are good, Muriel Harding and Ann Drummond. Crant and Leonard Osborn being old Savoyards; Thomas Round and Victoria Sladen are perhaps better known at Covent Garden: their diction is clear and in the ensembles they blend well. Generally the engineers have done a good job; occasionally during the louder passages the orchestra swamps the voices, but otherwise the balance is well adjusted.

Provided Acts I and II are up to this high standard this Opera will be a valuable addition to the G. and S. enthusiast's collection. Princess Ida really deserves a little more of the limelight, it contains some charming Sullivan music and the Gilbert wit is certainly not lacking—the "Ape Song" is delightful!

SO TO SPEAK . . .

For Classical Scholars

Schizophrenia means splitting of the mind and not, as you might think, a diaphragmatic hernia. —*At Goodmayes.*

CHTHONONOSLOGY (try pronouncing it), the geography of diseases. —*Dictionary.*

Medical Students, perhaps?

"A physiological textbook is amoral, but immoral persons may use such a text for immoral purposes!"

—Rachel Taylor, quoted in *Usage and Abuse*.

SPORT

SAILING

Annual Regatta

The Regatta was held at Burnham-on-Crouch on May 26, 27 and 28, some twenty-five people attending. The programme included two heats and a final of the Open Racing for the Commodore's Trophy, a Ladies' Race, and a friendly race.

On the whole we were very fortunate with our weather. The rain, although threatening, never materialised, and most of the sailing was done in sunshine. Fresh winds on the first two days necessitated reefing. There were no capsize, although both helmsmen and crews enjoyed some exciting moments. The racing was remarkably keen and close throughout, and some interesting "post mortems" were held in the evenings.

On the Friday, a Spring Flood and a light easterly wind provided interesting tactical conditions as well as perfect sailing weather. The Ladies' race, sailed in the morning over a short course, resulted in a split-second finish between the second and third boats.

In the final of the Open, H. Blake and Mr. J. Marsden started on the North Shore, while the other four helmsmen favoured the South side. At the beginning of the long and tricky beat against the tide A. Smart was well placed, but by the time the windward mark was reached, H. Blake worked out a convincing lead, which he held through to the run home.

Dr. Coulson presided and presented the prizes at the Club Dinner.

It is regrettable that once again the Preclinicals were conspicuous by their absence.

Commodore's Trophy: 1, H. Blake; 2, Mr. J. Marsden; 3, B. Waldron.

Ladies' Race: 1, Miss L. Rowswell; 2, Miss A. Lloyd; 3, Miss P. Farrar.

The Sherren Cup

This is a cup for which Inter-hospital Races are held annually during Whitsun weekend. Bart's Sailing Club won the cup last year and successfully defended it this year.

Bart's qualified for the final by winning their heat in TOURMALINE. The final was held on Whit Monday over a long course including two windward legs. Bart's, in AMBER, made a bad start, being recalled and having to recross the line. At the Holfiwell buoy, the first windward mark, AMBER was leading with Westminster, Guy's, London and St. Mary's following in that order. U.C.H. were disqualified at the start. Bart's held their lead, which was increased throughout the race, finally winning 7 minutes 25 seconds ahead of the second boat, London, with Westminster third.

CREW: H. Blake, M. Hayes, J. Misiewicz.

CRICKET

1st XI v. St. Thomas's. April 23 at Cobham St. Thomas's 121—5 dec.; Bart's 55 out. Lost.

1st XI v. U.C.S. Old Boys. April 30 at Chislehurst. Bart's 65—9 (Nicholson ret. hurt); U.C.S. O.B. 144—8 dec. Lost.

1st XI v. R.A.M.C. May 7 at Crookham. Bart's 97—6 dec. (Baterham 34); R.A.M.C. 53 out (Rotherough, D., 4 for 9). Won.

1st XI v. Hampstead. May 8 at Hampstead. Hampstead 208—5 dec.; Bart's 63 out. Lost.

1st XI v. Radcliffe Infirmary. May 14 at Headington. Bart's 170—4 dec. (Nichols 68, Marks 60 n.o.); Radcliffe 91—7 (Nichols 3 for 22). Drawn.

1st XI v. Romany. May 15 at Chislehurst. Bart's 240—7 dec. (Bower 78, Marks 63); Romany 87—3. Drawn.

1st XI v. Balliol College. May 21 at Oxford. Bart's 212—9 dec. (Nichols 60, Bower 55); Balliol 164 out (Mackenzie 4—32). Won.

1st XI v. Putney Eccentrics. May 22 at Chislehurst. Bart's 198—8 dec. (Bower 62, Nicholson 41 n.o.); Putney Eccentrics 93 out (Bloomer 3 for 15). Won.

1st XI v. Riddells Rovers. May 29 at Chislehurst. Riddells Rovers 169—6 dec.; Bart's 96 out (Nichols 34). Lost.

ROWING

Hammersmith Regatta: Maiden VIII's

The 2nd VIII was drawn against Oxford House. Bart's had a good start and took an early lead of half a length, but a few bad strokes at the end of a minute immediately reversed the position. Oxford House slowly increased their lead to win by one and a half lengths.

Crew: Bow, C. Wood; 2, A. Ellison; 3, P. Fenn; 4, M. Besser; 5, R. Marshall; 6, T. Bolton; 7, D. King; Stroke, D. Thomas; Cox, C. Berr.

London University Allom Cup

1st Heat: This was rowed against St. Thomas's, who were unfortunately unable to enter their complete 1st VIII. Bart's went away from the start and soon increased their lead to two lengths.

Final: Imperial College took two-thirds of a length in the first few strokes, but Bart's fought back hard and, rowing as well as any time this season, held on for most of the course. However, in the last few hundred yards several untidy strokes enabled Imperial College to row clear, and win by one and a half lengths.

Crew: Bow, B. Harrold; 2, D. Chamberlain; 3, P. Ormerod; 4, T. Bolton; 5, C. Doyle; 6, F. Piggot; 7, C. Hudson; Stroke, D. Stainsby; Cox, A. Geach.

United Hospitals Bumping Races

An account of these will be found elsewhere in this issue.

TENNIS

University of London Cup: 1st Round. May 7th at New Cross. Bart's v. Goldsmith's College. Won 5-4.

This match was played on the hard courts at Goldsmiths' College under conditions which were not ideal for tennis. A high wind coupled with brilliant sunshine made serving a rather hazardous procedure. However, Bart's were able to adapt themselves to the conditions more successfully than their opponents and the first pair, Walton and Goodwin, played very well to win all their matches. The second and third pairs were less successful, but contributed to the victory by each winning one of their matches. Bart's thus qualified to meet Imperial College in the second round.

Team: W. J. Walton, C. S. Goodwin, J. Worthy, J. T. Bench, W. S. S. Maclay, J. Mellows.

University of London Cup: Second Round. At Chislehurst on May 21. Lost 5-4.

Heavy rain delayed the start of this match and as a result the courts were damp and slippery. The conditions tended to make play very difficult and Bart's did well to win as many matches as they did against the cup-holders. The ultimate result was in doubt right up to the last match since at tea Bart's were leading by 3-2. The match was levelled at 4-all, and the last match between Bart's second pair and Imperial College first pair proved to be an exciting affair in which the initiative changed hands several times. Worthy and Bench for Bart's did well to win the first set at 7-5 and they raced away to a 3-love lead in the second set. At this point they faltered and very soon the set was lost 4-6. The final set was a dismal affair for Bart's and Imperial College won this by 6-1, and thus the match by 5-4.

Team: W. J. Walton, C. S. Goodwin, J. Worthy, J. T. Bench, W. S. S. Maclay, J. Mellows.

BOOK REVIEWS

Another damned, thick, square book! Always scribble, scribble, scribble! Eh! Mr. Gibbon?

—William Henry, Duke of Gloucester, 1743-1805.

I do not resent criticism, even when, for the sake of emphasis, it parts for the time with reality.

—Winston Spencer Churchill.

MODERN TRENDS IN BLOOD DISEASES, edited by J. F. WILKINSON (Manchester). Butterworth & Co. (Publishers) Ltd. 359 pp. 65s.

The founder of the distinguished Manchester school of haematology has edited this "guide to the present trends of the more important clinical and experimental investigations and research" in diseases of the blood; and his success, in selection of contributors and of material, is remarkable.

The titles of some of the articles show that haematology is not to be regarded as being the inalienable property of the pathologist. Thus, D.I.L. Griffiths writes on "Bone changes and blood diseases"; J. H. Twiston Davies on "Dermatological Aspects of blood diseases"; and W. Gaisford, Professor of Child Health, on "Paediatric Haematology." Then D. Dawson discusses "Changes in the Fundus in Diseases of the Blood" in a contribution that deserves to become a classic. The clinician has, indeed, come into his own again.

There is nothing parochial about this book: our transatlantic cousins have contributed from their well-filled store of experimental results. C. V. Moore has admirably summarized the present state

of our knowledge of iron metabolism, while Cartwright and Wintrobe pursue this important matter in connection with the anaemia of infection. Crosby and Dameshek have produced one of the best short accounts of haemolytic anaemia that has yet appeared, while Rimington, the only representative of London, makes "Blood Pigments and Porphyrins" misleading easy—until one reads him a second time, when one finds that the hidden treasures are precious but less comprehensible than they seemed.

Every contributor has given of his best—and an admirable best it is; and it is not possible to comment on every one. Even so, Israël's "Reticuloses" and Stratton's "Iso-immunization" must receive the reviewer's fullest praise.

In short, this is an admirable book for the haematological physician, for the laboratory haematologist and for the candidate for higher examinations. It is, of course, unfortunate that the price is so high: the book needs to be on hand for reference; but for most of us that will be impossible and we shall have to depend on the libraries who will, it is to be hoped, have enough copies in circulation.

A. PINEY

**THE PRINCIPLES AND PRACTICE OF
SURGICAL NURSING, by D. F.
ELLISON NASH, F.R.C.S. Edward
Arnold (Publishers) Ltd., 30s.**

WITHIN recent years the number of surgical books for nurses has increased rapidly, and the basic pattern of all has been similar. Surgery has been presented to the nurse in very much the same way as it is taught to medical students, but abbreviated or diluted, as if the authors believed that what the nurse needed was a kindergarten version of the doctor's surgical knowledge. There is a noticeable tendency in some books towards a strip-cartoon method of presentation, as though a series of pictures of a surgical operation would supply all a nurse's needs on that subject.

Everyone, lay or medical, feels interest or curiosity in reading such accounts, but if the needs of the student nurse are to be met, she must be shown her own rôle in the field of surgery and made to feel its importance. Her place with regard to the patient's future as well as his present, with his relatives and with the hospital community must be made clear to her, and she needs to see the nursing problems in connection with any patient and his complaints, and be shown that such problems are never insoluble.

Mr. Nash's book is a new departure because he recognises what the student nurse needs, and has written for us a book on surgical nursing rather than on surgery. He has a big reputation as a teacher in the nursing school in this hospital, and expectation has not been disappointed. His book is 1,000 pages long, packed with information not about operative details, but about the principles underlying surgical treatment and how to deal with practical questions ranging from the ways by which an intravenous infusion may be kept running, to the problems of a patient who wants to know if he has cancer. He tells how to remove different kinds of skin clips and subcuticular stitches, how to prevent blood getting into the hair at thyroidectomy, how to put drops into the eye, what to apply to the skin around a gastrostomy tube, and how to give a hypodermic injection to a child. The author has firm convictions on all kinds of technique, and on at least one instance his

ideas are ahead of current practice. There is no doubt, for instance, that the no-touch method of catheterisation should be generally adopted.

The sections on pre- and post-operative management are excellent; the one on uro-surgery is outstanding, and contains information of the greatest value on catheters, apparatus and instruments. The chapter on surgery in infancy and childhood shows the author's insight into the problems of the children and their staff. There is a very full account of anaesthetics; of theatre work and management, including a very good section on the care and maintenance of instruments. Throughout the whole book the nurse is addressed in adult terms, with no hint of patronage, as a colleague in the surgical team.

All the line drawings are well chosen and executed; for instance, nurses find great difficulty in understanding biliary operations and the drainage tubes involved, and there is a good figure on p.575 to help them. There are many useful illustrations of instruments, needle mounts and fittings, and apparatus of all kinds.

For a book of this size the number of misprints is very small indeed, and criticisms that come to mind are of detail rather than principle. For instance, biopsy of the endometrium is not "D and C" (p. 752). The bandage in Fig. 329 has an abnormal number of ends and fails to cover the dressing. The use of rubber tubing on an undine (p. 841) appears an unnecessary complication, and lotion should be tested with a thermometer, not the back of the hand.

Mr. Nash is to be congratulated not only on the amount of relevant information that he has gathered together, but also on his appreciation of the nurse's viewpoint. The publishers have served him well, producing a handsome book, pleasant to handle, at a price that is more than reasonable for the value given.

MISS W. E. HECTOR.

MEDICAL ART AND HISTORY IN EXETER

A Catalogue of the Exhibition

This Catalogue of an exhibition of the treasures of medical literature from Exeter Cathedral, Exeter Medical Library, and from the Archives of the City of Exeter and the Royal Devon and Exeter Hospital serves to remind one that not all the great bibliographical treasures of medicine are housed in the larger medical libraries of London. Organised by Mr. Norman Capener, President of the Devon and Exeter Medico-Chirurgical Society, and also a Bart's man, the exhibition was held to raise funds for restoring the old books in the Exeter Medical Library. We hope that this object was successfully achieved.

Exeter was a prominent medical centre at one time, and we must mention in particular its connection with John Haddy James; a pupil of John Abernethy, and a regimental assistant surgeon at the Battle of Waterloo, who later achieved great distinction in his native city.

It is difficult to pick out items for special mention among the manuscripts, books and portraits recorded in the catalogue, but we note a fourteenth century manuscript of John of Gaddesden's *Rosa Anglica*; a copy of Celsus' *De medicina* printed in 1497; the second edition of Vesalius' *De fabrica*, 1555; *De homine*, 1662, by Descartes; Hooke's *Micrographia*, 1665; Glisson's *De rachitide*, 1660, and *Anatomia hepatis*, 1665; Burton's *Anatomy of melancholy*, 1628; and classic contributions by Cheselden, Pott, William and John Hunter, Jenner, Abernethy, Astley Cooper, Charles Bell and John Sheldon.

Finely produced and illustrated, this informative catalogue is a valuable guide to the Exhibition, while those who were unable to visit the latter can derive great pleasure and profit from browsing through this fascinating record.

J. L. THORNTON.

MEDICAL PROBLEMS OF OLD AGE, by A. N. EXTON-SMITH, M.A., M.D., M.R.C.P. John Wright and Sons Ltd., pp. 344, illus 17. 30s.

This book is written by one of the younger generation of physicians who practice Geriatrics. It describes medicine and surgery in later life as encountered at a general hospital. After a preliminary discussion of the difficulties of diagnosis due to silent disease and multiple pathology, the author goes on to consider the maintenance of health and home care for old folk. His chapters on rehabilitation are interesting and also informative. He continues with accounts of surgery in aged subjects; cardiac and vascular disease; respiratory disorders; neurological lesions; and so on, for every system in the body. Dr. Exton-Smith also shows pictures of equipment used for rehabilitation of hemiplegic patients, one or two clinical photographs and a few X-rays of conditions commonly found in later life. The book concludes with an index and a list of authorities from whose writings quotations have been made.

When reading this volume, the reviewer was reminded of the book "Diseases of Old Age," written by Colonel Lipscomb in 1932, at the Royal Hospital, Chelsea. Both attempt to cover the whole gamut of disease in old age. Both quote extensively from the writings of general physicians and surgeons. Neither offer much original observation from their own material. As a simple text-book of the diseases of later life, "Medical Problems of Old Age" is quite useful. It gives a reliable account of what is already known in this field and can be commended to the senior student.

T. H. H.

MIDWIFERY BY TEN TEACHERS, 9th Edition. Edward Arnold (Publishers) Ltd. 32s. 6d.

This book is intended for students and young practitioners and it fulfils this role very adequately. Coming as it does from a long line of previous editions, it is well planned. And the present edition has three new chapters on neo-natal paediatrics, which are very informative.

On first acquaintance, the book gives the impression of being a rather dull manual; but this impression is soon lost, since the text is in good style and full of concise and clear information. Alternate theories and methods of treatment are described shortly, and the authors are to be congratulated on limiting discussion to important and basic points, without discursive matter relating to interesting but debatable theories.

The chapters on albuminuria and pregnancy, and diseases associated with pregnancy, are very good. And if the short chapter on ante-natal care was read and remembered by students and practitioners, it would undoubtedly prevent unnecessary obstetric tragedies in general practice.

There are some minor criticisms that can be made, such as the very poor illustrations shown in figs. 4, 86, and 90. On the whole the illustrations are clear and accurate, and X-ray reproductions

are of good quality. Good use is made of a simple sub-titling layout, the printing is clear and the paper of good quality.

This book can be recommended as a concise and complete guide to current obstetric undergraduate teaching in London, and should help the examinee in any trial in the examination rooms.

S. F. HANS.

TEXTBOOK OF MEDICINE FOR NURSES. 2nd edition. By J. W. JOULE. H. K. Lewis & Co. Ltd. 27s. 6d.

The first edition of Dr. Joule's book was published three years ago, and he has needed to make few alterations to bring it up to date. The second edition has enabled the publishers to reduce their price, and the author to make two major changes. The chapter on nephritis is now in accord with general opinion on classification and nomenclature. The section on drugs has been considerably changed and improved by omission and inclusions, but a curious mistake still persists on page 461, where papaveretum (omnupon) is consistently described as "papaverine." The clear pleasant style of the author and the attractive format of the book remain its leading characteristics.

W. E. H.

AWARDS

JUNIOR SCHOLARSHIPS IN ANATOMY & PHYSIOLOGY 1955

1st Scholarship: G. M. BESSER.
2nd Scholarship: R. J. CHAMBERS.

BENTLEY PRIZE 1955

Awarded to
M. E. PLUMB.

TREASURER'S PRIZE 1955

Awarded to
T. H. HAYLE

Certificates:
B. N. Ballantine
B. M. Brookes



A Warbling of Words

"None of your medical jargon", patients sometimes say haughtily; "just tell me what's wrong".

Yet if I reply: "You've got a pain in your back", or "Medically speaking, I should call that a spot on the face", they are not really satisfied. They much prefer to be told they have lumbago, or a macule. Everybody, including the doctor, likes to give a nice dignified name to a thing: it seems so businesslike.

According to the Oxford English Dictionary, drowsing through the centuries, this contemptuous use of the word "jargon" for "the language of scholars, the terminology of a science or art", is quite recent, only dating from about 1651. Before that jargon meant, for the Old Frenchman, a warbling or twittering of birds, becoming nonsense or

Irritating of us to leave this delightful essay unfinished? Blame space—and send us a p.c. if you'd like to finish reading it. This is one of the now-become-famous "Proseings of Podalirius", written by an erudite doctor with a deliciously humorous pen, and collected in a booklet. Shall we send you a copy? Our address is below.

VITAMINS LIMITED

DEPT. (G. 3)

Upper Mall, London, W.6

Makers of

SEMAX VITAVEL SYRUP VITASPRIN

BECOVITE BEPORTISS PREGNAVITE COMPLEVITE

FERTILOL CREAM CHOLINVEL ETC.

THE WORLD'S GREATEST
BOOKSHOP

FOYLES
...FOR BOOKS...

Bookbuyers throughout the world turn to this bookshop as a knowledgeable source of information on all their book requirements. And from generation to generation they praise and recommend Foyles — and buy their books here.

Foyles have departments for Gramophone Records, Stationery, Music, Handicraft Tools and Materials, Magazine Subscriptions, Lending Library, Foreign Stamps.

119-125, CHARING CROSS ROAD,
LONDON, W.C.2.

Gerrard 5660 (16 lines) • Open 9—6 (inc. Sat.)
Two minutes from Tottenham Court Road Station

Smith's for . . .

**NEWSPAPERS
PERIODICALS
& MAGAZINES**

All are available and can be posted regularly to your friends overseas.

**FOUNTAIN AND
BALL-POINT
PENS**

Popular makes are available and most can be repaired.

**PRESS
ADVERTISING**

Press announcements and advertisements placed in any publication

BOOKS

For relaxation. Professional and technical books obtained to order.

BOOKBINDING

All kinds of bookbinding undertaken. Estimates gladly given.

STATIONERY

Private stationery, visiting cards and greeting cards quickly printed. Estimates supplied without obligation.

W. H. SMITH & SON

NEWSAGENTS BOOKSELLERS STATIONERS

SHOPS AND BOOKSTALLS

The best
of the
light ales



is a



WHITBREAD

Vita-Weat

is ripe
whole-wheat
goodness



It's the special 'nutty' flavour of ripe, whole wheat that makes Vita-Weat so delicious. Convalescent patients enjoy it, and as an important constituent of many balanced diets, it is nourishing and digestible. Enquiries will be welcomed from the Medical Profession interested in the dietetic qualities of Vita-Weat.

PEEK FREAN & COMPANY LTD., LONDON, S.E. 16

CASSELL MEDICAL BOOKS

CLINICAL NEUROLOGY

by FRANK A. ELLIOTT, M.B., CH.B., F.R.C.P., BRODIE HUGHES, CH.M., F.R.C.S., and J. ALDREN TURNER, M.A., D.M., F.R.C.P.

This important British textbook on neurology consists of two main sections: the first dealing with the applied anatomy and physiology of the nervous system, and methods of examination; the second with individual diseases, their classification, aetiology, diagnosis, prognosis and treatment. The accent throughout is on clinical aspects.

"A work whose intrinsic merits and handsome production ensure its place in the treasury of neurological textbooks for which English medicine is so justly famed."—*British Medical Journal*

Illustrated 42/- net

CLINICAL ENDOCRINOLOGY

by A. W. SPENCE, M.A., M.D., F.R.C.P.

A textbook for post graduate students and general physicians. A separate section covers each gland: the physiological actions of each hormone followed by the conditions arising from disordered function, and the incidence, clinical features, diagnosis and treatment of endocrine disorders are given.

"This outstanding publication . . . is the best book that has appeared in this field for some years and it will become a standard work for students, postgraduates, and all physicians interested in the subject."—*British Medical Journal*.

Illustrated 50/- net

37/38, St. Andrew's Hill, London, E.C.4

Contrary to common
belief there are important
differences between
infant milk foods

TRUFOOD
MEDICAL HANDBOOK

Practical details of the range of
Trufood milks are given in the

TRUFOOD MEDICAL HANDBOOK

This Trufood Handbook for the Medical Profession, a convenient, pocket-size publication, gives analyses, characteristics and feeding tables for all Trufood products for infant feeding. There is also a section of tables and general data on obstetric and paediatric subjects for quick reference. A free copy of this book will be sent to any doctor or student on receipt of the coupon below.

To Trufood Professional Name _____

Information Service, Address _____
Green Bank, London, E.1.

Please send me
a copy of your
Medical Handbook.

TFD 75-155-100

Why MIXOGEN is prescribed for menopausal symptoms

Because it is now established that:—

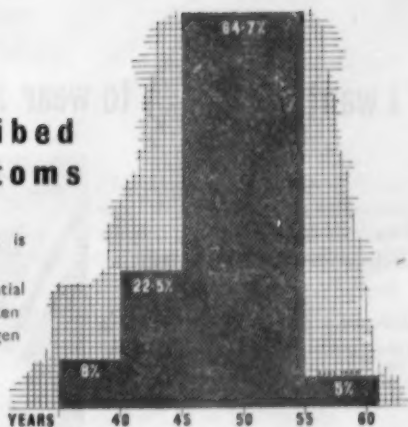
- combined male and female hormone treatment is the most effective in this condition.
- the correct balance of the two hormones is essential both for efficacy and economy—determined by extensive clinical trial in the U.K. and unique to Mixogen
- both the hormones in Mixogen are completely effective when swallowed—thus maximum, immediate relief is given in the simplest and most convenient way.



Dosage: Initially 1-2 tablets daily, reducing when possible.

Packs: Perspex tubes of 25 tablets and bottles of 100, 250 and 500.

Literature on request.



Graph showing percentage of average age of onset of menopause, drawn from figures compiled by the Council of Medical Women's Federation in England.

MIXOGEN

Ethinyl Oestradiol B.P. (Lynoral) 0.0044 mg.
Methylestosterone B.P. (Nen-hombreol 'M') 3.6 mg.

ORGANON LABORATORIES LIMITED

BRETENHAM HOUSE · LANCASTER PLACE · W.C.2

Telephone: TEMple Bar 6785-6-7, 0251-2.

Telegrams: Menformon, Rand, London



When you receive a cheque

... what happens? If you must seek out some accommodating person in order to obtain the cash, isn't it about time you had a bank account of your own? It's very easy to become a customer of the Westminster Bank. Modest means are no bar and it is very certain that you would find your bank account helpful in dealing with personal expenditures, grants and allowances. Any branch of the Westminster Bank will be glad to explain the simple procedure.

WESTMINSTER BANK LIMITED

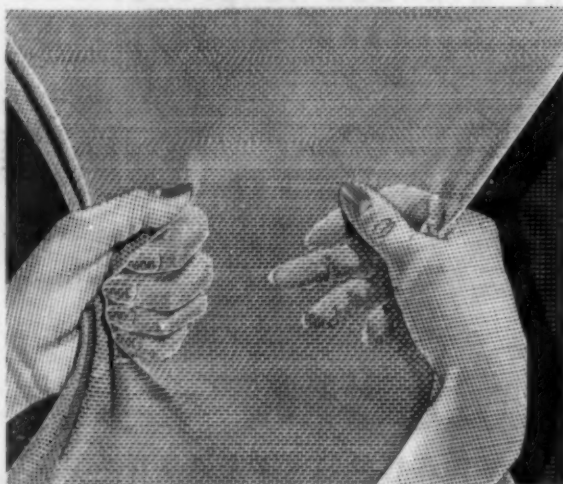
Cheapside Branch: 162 Cheapside, E.C.2

'I want you to wear a Lastonet stocking'



Lastonet surgical stockings are always made to measure for a perfect fit. The lightweight elastic net stretches in all directions for even support and allows air to come in contact with the skin. The stockings may be prescribed under the National Health Scheme.

Lastonet
ELASTIC
NET STOCKING



LASTONET PRODUCTS LTD, CARN BREA, REDRUTH CORNWALL

Q1

INSURANCE

for your home

The "Car & General" Comprehensive 'Home' Policy includes FIRE, BURGLARY, DOMESTIC SERVANTS and many other incidental risks to a home.

for yourself

In these days a "Car & General" Personal Accident Policy is more of a necessity than ever before

CAR & GENERAL

INSURANCE CORPORATION LTD.

83 PALL MALL, LONDON, S.W.1

IN summer, when the days are long,
Perhaps you'll understand the song.
said



HUMPTY DUMPTY

But long summer days can mean agony for sufferers from hay fever or coryza—they find very little to sing about. 'What can I do about it, Doctor?' is the refrain. Well, you can do something for them: prescribe a Riddell Product, and give your patients the benefit of years of research and experiment. Here are some brief details: we'll gladly send you fuller information on request.

RIDDOSAN OIL

A non-irritant oily preparation containing terpenes and pine extract in combination with ephedrine and other vegetable products. It has antiseptic, soothing and expectorant properties, and is indicated in Hay Fever, Tonsillitis, and Laryngitis, being particularly suitable for children. It is supplied in $\frac{1}{2}$ oz. and 1 oz. bottles, and should be atomised by a suitable oil inhaler, such as the RIDDOSAN HOME INHALER.

THE RIDDOSAN INHALER

An inhaler of the usual high Riddell Standard. It has been specially designed for the Administration of the Riddosan oil as it gives a relatively fine vapour with oily medicaments.

Furnished with a flat-based rubber bulb, the Inhaler can be kept conveniently at hand for immediate use.

On no account should this Inhaler be used for the RIDDOBRON Therapy or any of the RIDDELL Asthma Inhalants as it has not been designed to give that extremely fine dry dry vapour essential for this type of Inhalant.

RIDDELL PRODUCTS LIMITED

The Leading House for Inhalation Therapy

10-14 DUNBRIDGE STREET, LONDON, E.2.

Telephone: BISHopgate 0843

Telegrams: Pneumostat, Beth, London

DIETS FOR RESEARCH ANIMALS

The makers of Blue Cross Animal Feeding Stuffs supply most of the leading British medical schools and research stations and many American Organisations with specially formulated diets for rats, mice, rabbits, guinea pigs, and other animals kept for research. The diets are scientifically prepared from freshly-milled ingredients, in the Mills of Joseph Rank Ltd., and Associated Companies.

Enquiries are invited from other medical schools, research centres and laboratories

BLUE+CROSS
Balanced Rations



*By Appointment
Joseph Rank Ltd. Manufacturers
of Animal Feeding Stuffs to
the late King George VI*

JOSEPH RANK LTD., MILLOCKRAT HOUSE, EASTCHEAP, LONDON, E.C.3. Telephone: MINcing Lane, 3011

**Two weapons
against
Athlete's Foot
and other
fungal dermatoses**



The combined use of Mycil Ointment and Powder has proved to be highly effective in both prophylaxis and treatment of fungal dermatoses.

Mycil Ointment is formulated to ensure penetration of the active constituent, chlorphenesin, to the site of the infection.

Mycil Powder, used alone, prevents reinfection. Because of its adsorptive properties it is a valuable agent with which to combat the effects of excessive perspiration.

Both preparations are non-mercurial and odourless and may be used over long periods, if necessary, without adverse effects.

'MYCIL'
TRADE MARK

MYCIL OINTMENT in collapsible metal
tubes 1/6
MYCIL POWDER in sprinkler tins 1/6
Basic N.H.S. prices



'MYCIL' Pessaries are available for treatment of trichomonal and fungal infections of the vagina. Tube of 12—3/-.

THE BRITISH DRUG HOUSES LTD. (Medical Department) LONDON N.1

MYC/M/551